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ABSTRACT

Population education is at different stages of development in the Asian countries, but almost all of the countries show an interest in developing population education programs. This manual for designing and implementing population education programs consists of six chapters. Chapter one highlights issues and problems arising in connection with curriculum development in population education and with teacher education programs for elementary and secondary school teachers. The objectives, selection of curriculum content, and mode of inclusion are discussed. Chapter two provides the general pedagogical background for organizing and managing training programs. In chapter three a general procedure for developing a training program is discussed, and case studies are offered of inservice teacher training programs in Asia. Chapter four describes different strategies for introducing population education in preservice teacher education programs. Variations in target groups, institutions, duration, objectives, and content are taken into consideration. In chapter five, the various target groups needing orientation or training through inservice programs are identified and their training needs outlined. The final chapter discusses training methods before, during, and after training, and suggests follow-up activities. (JD)

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Training Manual in Population Education

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FOREWORD

Most nations have recognized the interrelationship between population and development - that unplanned population growth contributes to the perpetuation of poverty, malnutrition and the dehumanization of people. Many countries in the Asian region have started population programmes and some others are in the process of initiating them. These countries have realized the need for population education as one form of intervention to improve living conditions and to mitigate the negative impact of population growth within the family, the community and the nation.

As population education programmes are being implemented in countries, the need for trained personnel becomes more and more pronounced. Providing orientation and training to the maximum number of such persons within a reasonable period of time is a major problem. Population education being a new field and controversial in some aspects makes the organization of training programmes all the more complicated. A variety of strategies for pre-service and in-service have to be used in order to train the personnel needed for teaching population education. At the moment there is no comprehensive training guide which can be used for organizing training for different target groups.

The Consultative Seminar on the Training Needs in Population Education Programmes held in January 1975 recommended that as a part of materials development activities at the Regional level, a training manual should be prepared which would be useful for countries in the region for developing training programmes. As a follow-up to this recommendation and in response to the expressed need of the Member States for guidelines for organizing training programmes for different categories of persons, a project for the preparation of a training manual in population education was taken up by Unesco Population Education Programme Service, with the financial support from the United Nations Fund for Population Activities.

The general outline and the first draft of the manual was prepared in a writing workshop in June 1976 by a team of educators and specialists, consisting of Dr. Winarno Surachmand, Prof. Swarna Jayaweera, Dr. Evelina A. Mejillano, Prof. J.E. Jayasuriya, Dr. R.C. Sharma (who also acted as coordinator) and Dr. A.A. Khan. The first draft was reviewed by the Unesco Mobile Team in Population Education and was then reproduced in multiple copies by the Unesco Regional Office. Copies of the Trial Edition were sent to selected educators within and outside the region to obtain their comments and suggestions. The manual was also tried out in two Regional Training Courses in Population Education held at Unesco Regional Office Bangkok in 1976 and 1977. The Trial Edition was reviewed and revised by the Mobile Team in the light of the comments.

This manual has been developed with a view to providing guidelines for organizing different types of pre-service and in-service training courses in population education for different categories of persons likely to be involved. It is hoped that it will provide a rich resource for developing different types of training programmes according to the needs and facilities available in teach country.

The Unesco Regional Office for Education in Asia wishes to express its deep appreciation to the resource persons of this manual. Grateful thanks are also due to the educators, institutions and participants in the Group Training Courses whose valuable comments and suggestions were very useful in finalizing the Training Manual.

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INTRODUCTION

The Population Problem

The population of the world in mid-1975 was approximately 4,000 million and was growing at a rate of 1.9 per cent a year. The population of Asia was estimated to be about 2,300 million or 57 per cent of the total world population. The rate of growth of the Asian population, 2.1 per cent per year, is higher than that of the world. Given these rates of growth, it is estimated that by the year 2000 the population of the world will be about 6,300 million while that of Asia will be 3,600 million.

Slightly more than 70 per cent of the population of the world live in less developed regions, the corresponding proportion for Asia being as high as 95 per cent. The population of the less developed countries of Asia also constitutes about 75 per cent of the total population of the less developed world.[1/]

More than half the population of the world, and about three fourths of the population of Asia, are suffering from poverty, malnutrition and undernutrition. It has already become a question of survival for a significant proportion of the population in some countries in Asia, and the situation is getting worse with increasing population. All efforts to improve the standard of living of the people and alleviate human misery are nullified by the increase in population. There are some projections which indicate that at the present rate of population increase and of consumption many vital resources will be exhausted by the end of this century. How far technological innovations will help solve the problems of food, energy and other resources without deteriorating the environment and affecting animal and plant life is very uncertain.

In addition to the problem of rapid population growth, there is also the problem of rapid urbanization that has resulted in the growth of slums, massive over-crowding, unemployment, and the malfunctioning of water, sewerage and transport services in a number of cities.

Population Policies in Asia

Recognizing the gravity of the population situation, most countries in the Asian region have now adopted population policies in one form or another. By population policy is meant any set of official measures to influence the size, growth, composition or distribution of population in a country. Among the policy measures taken in this regard are those relating to health, agriculture, education, employment, housing, status of women, industrial development, rural development, population resettlement schemes,

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1/ The information in paragraphs 1 and 2 has been obtained from United Nations, Demographic Yearbook 1975, and World Population Prospects as Assessed in 1973, Population Studies no. 60.

social legislation and family planning. Of these, family planning is a direct measure to influence fertility whereas the others are indirect measures to influence not only fertility but also the other two components of population change, namely mortality and migration. On the basis of the population policy measures, direct and/or indirect, taken by them the countries in the Asian region may be classified into three categories: (a) countries having an official policy to reduce the population growth rate. In addition to supporting family planning to implement this policy, countries in this category also support family planning to implement this policy, countries in this category also support family planning for reasons of health and as a human right; (b) countries giving official support to family planning activities for reasons other than demographic reasons. Countries in this category usually support family planning for reasons of health and as a human right, but any anti-natalist effect is a by-product and not an objective; (c) countries which do not have a policy to reduce the population growth rate, and do not support family planning programmes for any reason, demographic or otherwise.

Status of Population Education in Asia

Several countries in Asia started family planning programmes in the fifties and sixties in order to curb rapid population growth. Some of these programmes included an information - education - communication (IEC) component as an integral part. The IEC component generally used the mass media, over-simplifying complex issues in the process. For example, a message frequently conveyed was that the small family is a happy family. This simple assertion could hardly be considered true or meaningful in many situations. The main purpose of the family planning information activity in this narrow sense was to create awareness of the possibility of controlling the number and frequency of births by means of various contraceptive techniques.

The family planning programmes started in Asian countries have, with few exceptions, not been conspicuous successes. This lack of success may be attributed to such factors as the high level of illiteracy among the people, the low status of women, social and religious preferences, and the absence of any system of social security. In any case, it has been increasingly recognized that programmes of information - education - communication addressed to adults on a simplistic basis are not sufficient. Adult programmes should have a strong component of education, but at the same time it is necessary to provide relevant education for the child of today who will be the adult of tomorrow.

In most Asian countries, children under 15 years of age constitute about 40 to 45 per cent of their population. These young people will constitute the adult population in the next few decades, and their reproductive behaviour and attitude towards family size will be of central importance in determining population growth. They need to become aware of the problems caused by population pressure for the individual, the nation and the world, and to be provided with an education that would enable them to make informed decisions and ways of thinking which would help them to make inform informed decisions with regard to population issues. Probably, a combination of various methods of inducing population change is needed to solve the problem, and among them education of adults as

well as of children, the parents of the future, may be one of the most influential. As to what kind of education will be most effective is still an unanswered question. There are immediate problems of trained personnel in this new field as well as of materials which can be used by educators, teachers and students.

As a result of the recognition that education is an important instrument for bringing about changes in attitude and behaviour, many countries in the Asian region have taken an interest in developing population education programmes. Initially, the concern of population education was to supplement family planning programmes through the formal education system. Since then, a broader concept of population education has developed. Population education as presently conceived aims at developing an understanding of the processes and consequences of population change on the family, community, society, nation and the world, and to develop such attitudes and behaviours as may help in making responsible decisions. Many countries have initiated population education programmes for the formal school system, but recently they have been extended to out-of-school adults and youth in a few countries.

Unesco became involved in population education in the late sixties. A workshop organized at Bangkok in 1970 by the Unesco Regional Office for Education in Asia has had considerable impact in the field by the interest it stimulated and the foundation it laid. The United Nations Fund for Population Activities (UNFPA) has also recognized the role of population education in promoting an understanding of the problems arising from rapid population growth and excessive urbanization. It has provided financial support to national and international programmes in population education through Unesco, ILO, FAO, WHO and through the UNDP country programmes.

At the national level, population education programmes stem from the population policies adopted by the respective governments. Population education activities are in this sense carried out within the framework of national development programmes. Five countries in Asia-Bangladesh, Republic of Korea, Malaysia, Philippines and Sri Lanka - have national population education projects of 3 to 4 years' duration funded by the UNFPA, while Indonesia has a programme jointly funded by the UNFPA and the World Bank. In some countries separate units or cells for population have been created. There are also countries in the region which have not developed any organized programmes in population education as yet. Thus, population education is at different stages of development in the Asian countries, but almost all the countries having population policies show an awareness and interest in developing population education programmes, for the in-school as well as out-of-school population, as an important component of their national development activity.

Organization of the Manual

The manual consists of six chapters:

1. Issues in population education;
2. Organizing training programmes;
3. Developing a training programme in population education;
4. Pre-service training programmes in population education;

5. In-service training programmes in population education; and

6. Evaluation and follow-up activities in training.

Chapter 1 highlights the issues and problems arising in connection with curriculum development in population education and with teacher education programmes in population education for elementary and secondary school teachers and which are engaging the attention of educators. These issues have been discussed under the following headings:

Conceptual Issues:

i. Objectives
ii. Selection of content and curriculum development
iii. Mode of inclusion

Training Issues:

Curriculum in population education for teachers.

Chapter 2 provides the general pedagogical background for organizing training programmes.

Chapter 3 a general procedure for developing a training programme is discussed, and case studies are offered of a few in-service teacher training programmes in the Asian Region. This chapter should be suggestive for developing programmes of teacher training in population education in different countries in the region according to their special needs and problems.

Chapter 4 describes different strategies for introducing population education in pre-service teacher education programmes. Variations in target groups, institutions, duration, objectives, and content are taken into account in the suggestions offered. A range of methodologies is also listed.

In chapter 5, the various target groups needing orientation/ training through in-service programmes are identified, and their training needs are outlined. Some modalities of meeting these needs are presented in terms of the selection of clientele, training goals and objectives, duration of courses, and content.

Chapter 6 discussed pre-training evaluation, process evaluation, post-training evaluation and follow-up activities. A suggested evaluation schedule has also been given at the end.

Chapter 1

ISSUES IN POPULATION EDUCATION

1.0 Introduction

It is an inevitable feature of curriculum development that the introduction of a new area of study and the organization of related teacher education programmes give rise to a number of problems and issues associated with appropriate curriculum strategies and materials, and adequate personnel. Population education as an educational programme and a curriculum area has a history of less than ten years.

The first part of this chapter sets out some of the issues which are currently engaging the attention of population educators. Their implications for teacher education programmes are also discussed. The second part of the chapter deals with certain other issues central to the preparation of teachers for population education.

2.0 Conceptual issues

Among the several issues in population education that have provoked a great deal of discussion, three have been selected below for discussion: namely objectives, content and mode of inclusion.

2.1 Objectives

Since the very concept of population education was formulated in response to an environmental situation which has many value-laden ramifications, definitions of goals and objectives depend naturally on different perceptions of the situation. Some confusion prevails therefore with regard to the objectives of a course in population education, and teacher education programmes may lack coherence unless some of the issues identified here are clarified.

2.1.1 The view is held sometimes both within and outside the education system that population education is another name, or even an euphemism, for sex education and/or family planning education.

2.1.2 Some definitions limit population education to population dynamics and specifically exclude sex education, birth control and family life education. Others include the latter areas and make reference to family size, spacing of children and the reproductive system.

2.1.3 Definitions also differ in the emphasis given to the cognitive, affective and skill domains. In fact, specific behavioural outcomes of a value-laden nature such as acceptance of the small family norm are advocated by some while others are more open-ended in regard to such matters. Further, it is often not made clear as to how attitudinal changes are to take place, changes in norms promoted, or "rational" decision-making ensured, while the whole area of skills - an area significant for teacher education - remains nebulous.

2.2 Selection of content and curriculum development

2.2.1 Controversial issue

As teachers are intended to be the chief purveyors of information and active agents in promoting attitudinal behaviour, their own commitment to the objectives of the programme must be assured. Population education, however, bristles with controversial issues which impinge on the value system and on political and social attitudes. Some of the issues on which such differences of opinion prevail are outlined here as they affect teachers both in the teaching situation in which they must work, and in their role and activities as teachers.

In some countries there is cultural or religious resistance to the inclusion of sex education and to any reference to a family size norm in the school curriculum. Insistence on their inclusion may in such circumstances lead to resistance thereby jeopardizing the success of the whole programme. Decision to include such material have therefore to be determined in the national context.

The desirability of promoting the acceptance of a small family size norm through the school is being questioned. The psychological implications for young children from large families who may feel embarrassed or rejected as a result of the pursuit of such an objective, and the patent flaws in prescriptive curriculum materials which insist that "the small family is a happy family" highlight the need for presentation of more balanced concepts.

Plural societies with their multi-ethnic, multi-linguistic and multi-religious population sub-groups constitute another sensitive area where teachers as well as others need assurance that population policies do not have as their objective the creation of new population imbalances detrimental to the interests of some of these groups.

The different perceptions of the importance of population factors as focused in population education programmes have led to much debate and discussion. These different approaches have political nuances and have become issues in the context of the recommendations of the World Population Conference in Bucharest in 1974 and the involvement of the Third World countries in the New International Economic Order. As many Asian countries belong to the so-called Third World, public attitude and teachers' attitudes tend to reflect these views and reservations.

These issues centre round the views that:

a) population problems are an integral part of the total development process, that rapid population growth is only one cause of poverty, and that a reduction in the population growth rate is no guarantee of social and economic progress;

b) population education should therefore stress the interrelationship between population dynamics and economic and social development, deal with <u>both</u> determinants <u>and</u> consequences of population growth and that population planning be viewed as a part of total social and economic planning;

c) although a uniform global view is not possible population education should be presented in a global frame-

work as well as in the national context; that is, within the overall framework that population is not only a problem of poor non-industrialized countries, that employment, consumption and environment problems are found in both over-populated and under-populated countries, and that both pro-natalist and anti-natalist policies can be used as solutions to certain problems. The population education programme of a country will, of course, also focus attention on the national context and reflect national policy, explicit or implicit;

d) while the improvement of the quality of life is universally accepted as a desirable norm, this concept itself has different connotations which are linked with particular value-systems. An unvarying relationship between population growth rate, family size and quality of life is moreover seen as being untenable in terms of individual and social interaction;

e) meanwhile population education literature has given prominence to the view that population is the chief cause of socio-economic backwardness and the most potent weapon in the war against poverty and other ills;

f) in a context of such different views, any suspicion of the imposition of alien norms and objectives hampers the acceptance of programmes.

Selection of content is also influenced by the decision to use a directive or non-directive approach to attitudinal change. Should the population education curriculum prescribe a behaviour outcome e.g. small family size, or should it investigate the development process which may favour a different norm by the time this generation of students has reached the decision making stage with regard to population issues?

All these issues seem to point to the need for an orientation course as an important feature of any programme for teachers - a course which has to be structured in the specific context of (a) the needs and background of the learner and (b) the objectives and scope of the subject.

2.2.2 The knowledge base

The body of knowledge relating to population whether termed 'population studies' or grouped under any other name, draws data from a wide spectrum of academic disciplines e.g. demography, economics, sociology, geography, history, political science, social psychology, biology, medicine, home economics, environmental studies. There has been no complete agreement yet as to the specific content area of these disciplines which relate to population education, and educators have to grope their way through a mass of ever-increasing and sometimes unreliable data.

A population education curriculum needs data at both macro and micro levels. While data at the former level is forthcoming and research is an active on-going process, very little definitive work has been done in the area of population issues as they affect the individual and family.

In view of the fact that population education is a new curriculum area and that teachers have not been exposed to concepts in

this field within their own educational programmes, it becomes important to provide an adequate knowledge base for teachers to assist them in the selection and presentation of curriculum materials to their students.

2.2.3 Teacher education programmes have also

a) to include both 'academic' and 'problem-oriented' material and

b) to integrate data from a wide range of subjects if teachers are to be assisted to meet the demands of the population education curriculum.

2.3 Mode of inclusion

Some countries teach population education in the elementary school from the first grade or in the upper elementary grades. While the overall school enrolment situation in Asia indicates that the bulk of the school population drops out after the lower elementary grades so that elementary school programmes reach the largest number of children, the maturation level of the elementary or primary school child limits the population-related content that can be incorporated in the curriculum. Others introduce courses in the secondary school where students are fewer in number but are more mature and therefore able to cope with controversial issues and are nearer to the decision-making age. A wider range of more complex materials geared to the needs of the adolescent school leaver has therefore to be handled by secondary school teachers.

The policy followed in a country with regard to the mode of including population education in the school curriculum has important implications for teacher education programmes. The organizational pattern of the elementary school in most countries permits the class teacher to incorporate population education materials into instructional units relatively easily. The more structured and even compartmentalized organization of the secondary school curriculum has, however, led to the adoption of different approaches for introducing population education materials.

Some educators have recommended the introduction of a separate course in population education. Though administratively more convenient with regard to planning and coordination and academically more intensive in scope, school systems have not welcomed an addition to an already loaded curriculum. Such a course might also be more successful in achieving the objectives of population education but it would entail the preparation of teachers competent to handle a multi-faceted subject area or participate in an integrated team programme.

A separate and multi-disciplinary unit to be taught probably at the terminal stages of the elementary and secondary schools or secondary school alone would make the same demands on content but would lead to further complications arising from the problem of allocating and preparing teachers for this purpose.

The prevalent mode of approach in most countries and the least disruptive in organizational terms is the addition of population education materials to existing courses in different subject areas which lend themselves to the discussion of population issues. The usual subject areas are social sciences (social studies,

geography, economics, civics), science (biology), general science, health education, home economics, mathematics and literature. Teachers of these subject areas have therefore to teach population education content in the form of units or sub-units introduced at what have been termed strategic "plug-points". The term "infusion" has also been used to describe this approach but interpretations of this term seem to differ and cause confusion. The preparation of such units has received priority in population education programmes and should be a legitimate concern of teacher education programmes.

Another approach that has been suggested is the "permeation" of teachers with population education concepts and data so that they would have the necessary background to introduce such content into the school programme on their own initiative at appropriate points. The adoption of such an approach would throw the whole burden of curriculum design and implementation on the teacher.

The content of teacher education programmes in a country will be uniform or will differ from region to region according to the extent of local variation and the degree of decentralization permitted by the educational system to meet local needs and differences in cultural background.

3.0 Training issues

Certain important issues in population education and their bearing on teacher education have been discussed in the preceding section. Certain other issues directly concerned with training teachers in population education are discussed below.

3.1 Curriculum in population education for teachers

Three main curriculum areas, namely (i) orientation to the field of population education; (ii) the knowledge base and (iii) methodology have to be included, and one of the problems that arises in connection with (ii) and (iii) is the weightage that should be given to each of these areas. On the one hand, it is argued that stress should be laid on mastery of subject matter in the light of the consideration that the subject matter is new, and that the inclusion of content in the form of units in various subject areas implies the use of methodologies associated with these subjects. On the other hand, the objectives of population education in the affective and skills domains call for methodologies that are not in general use among teachers, and it would be wise to pay adequate attention to methodology in preparing teachers of population education.

Alternative modes of structuring population education courses in teacher education programmes need to be discussed in relation to the demands they make on personnel and on curriculum materials.

Population education could be taught as a separate course, whether designed for "specialist" population education teachers or subject teachers incorporating new content into their courses. The curriculum and their effort to cope with new and varied school programmes and administrative problems will present difficulties unless programmes are organized on a course unit basis.

A common core which will provide an orientation to the subject and an overview of the whole subject area with its atten-

dant controversies can be supplemented by subject-based courses which provide the knowledge base in the subject area as well as introduce teachers to appropriate instructional materials.

Where teacher education is organized on a subject basis, particularly in special institutions (e.g. specialist teacher's colleges) a course will have to be planned to initiate teacher into the use of population education material in their subject areas.

The curriculum for teacher education programmes will present materials at two levels. The orientation and knowledge base courses will call for reference work in some depth and field studies, which curriculum materials prepared by and for these teachers or teachers-to-be for school programmes will be oriented to the background of school pupils.

3.1.1 Instructional methodologies

The trend to incorporate population education materials in existing content areas has perhaps led to an emphasis on preparing materials which will dovetail into these subject syllabuses with the result that the methodologies and strategies utilized for teaching these subjects have been used in teaching population education materials. The structure and content of the particular subject have generally determined methodology. Such an approach is clearly inadequate.

The controversial issues involved, the value-related content and affective aspect of the subject necessitate adequate teacher preparation in handling such values and issues. An understanding of the background of learners, the extent of their socialization in the mores of their community, and their particular sensitivities is a pre-requisite to any effort to change attitudes. But the whole area of the attitudinal component of teaching and learning remains an issue in methodology.

A long-range goal of population education is adult decision-making with reference to population issues that affect the learner's life cycle. Teaching strategies have to be evolved therefore to ensure that school courses will lead to informed and responsible decision-making in the future, taking also into consideration the fact that population situations are not static, that the future is unpredictable, and that the most carefully calculated projections can be a mere academic exercise. Learner participation, analysis and judgement, selecting alternatives, problem solving and decision-making are all skill objectives in the abstract. Teacher education programmes have to translate these into action-oriented methodologies.

3.1.2 The problem of integration

While integration is a much publicized aspect of modern methodology, integration in population education has two dimensions. It has to be integrated with the subject area with which it is linked. In other words, if it is to be presented meaningfully it has to be dealt with in the socio-economic context as part of the development process in social studies, or with environmental topics in science or with family life in home economics. At the same time, these subject-related or subject-based units must also be integrated within the framework of the objectives of population education. If the teacher is to be an important agent of such a two-fold integra-

tion, the skills required for this task will have to be identified and methods to develop these skills should receive special attention.

3.1.3 The preparation of instructional aids

In addition to providing teachers with opportunities for enhancing their own experience and insights, teacher education programmes should also equip teachers with the knowledge and skills necessary for preparing materials for use with learners. Unlike in the case of traditional disciplines which have an accumulated and organized body of knowledge providing ready reference materials for even a beginning teacher, population education is a new curriculum area that needs to build up a body of instructional materials. The vast and amorphous body of multi-sectoral population-related data has to be filtered through a process which has to be specified by the school situation of the learner. Objectives have to be specified by school and grade level, themes selected, contents arranged in sequence, supplementary source materials indicated, and methodology, aids and evaluation techniques discussed.

The learner-centre and analytical approaches which have to be adopted in teaching the subject presuppose the use of structured and unstructured materials providing for maximum student participation. At the same time population education courses or units or sub-units added to the social studies, science, health education and home economics syllabuses need continuous revision in the light of ever-changing concepts and circumstances.

Chapter 2

ORGANIZING TRAINING PROGRAMMES

1.0 The purpose of training

From an operational angle, it is useful to realize that whereas education aims at preparing a person generally for successful living in the society of which he belongs, training strives to prepare a person to carry out a specific set of tasks in relation to particular occupation. This distinction is, of course, more a matter of emphasis rather than a fundamental difference. In fact, training is but one form of education. It is a specialized and practical form of education in that it prepares the trainee to do a job well. In other words, training exists to bring about learning leading to effective job performance.

Properly conducted, training not only improves performance but also increases the motivation and confidence of the trainee. Through a series of learning activities within a training programme, the trainee is expected to manifest better understanding of the tasks to be performed, and thereby increase the efficiency and quality of his work. Thus, his behaviour is intended to be modified by means of the training process. As a result of participation in a training programme, goal-directed learning is expected to take place.

Facilitating a trainee's job-specific behaviour is the essential task for a training designer. To achieve this goal, it is necessary that training should be well planned. The purpose of planning the programme is to ensure effective learning. In other words, a planned programme of training should create the necessary and sufficient conditions for learning to occur.

Conditions for learning should not be thought of as being only physical. They are, above all, psychological and social. One important psychological condition is the existence of motivation to learn. The trainees need to be motivated to respond to appropriate training stimuli. Without strong motivation, learning can hardly take place. Another important learning condition is the opportunity to apply what is learned. Since most training programmes are essentially action or performance oriented, the trainees should find themselves constantly verifying, applying, checking and experimenting with the principles or skills that are learned. By means of simulation and similar exercises meaningful participation should by frequently encouraged. In addition, the trainees should have opportunity for immediate feedback, another important condition to enhance learning. Then there is the fact that no two individuals are alike; each one has his own individual characteristics. This brings out the need for another learning condition: a programme that is flexible and takes account of individual differences among the trainees.

2.0 How do people learn?

The training designer should have a good working concept of how learning takes place, for only then will he be able to carry out his task effectively.

Learning is a process by which an individual through his/her own activity changes in behaviour. This change in behaviour may be a change in knowledge, understandings, attitudes, skills, appreciation etc.

Psychological research shows that successful learning takes place when

a) there is a need for learning;
b) what is to be learned is meaningful to the learner;
c) learning involves active participation by the learner;
d) initial learning is related to what the learner already knows, rather than to what the instructor knows;
e) when feedback is prompt.

Teaching, therefore, is essentially a process of helping the learners to

a) open up new vistas in the life of each individual in a meaningful, personal context;
b) see why the things to be learned are useful to them;
c) relate new learning to their previous knowledge;
d) actively and freely apply what they learn;
e) get immediate reinforcement.

Briefly stated, the instructor's main task is to create the conditions under which the trainees will have the best opportunity to achieve success in learning. While learning involves work, it should at the same time be a pleasant experience to which every trainee would eagerly look forward. A few other psychological principles of the teaching-learning process as applicable to training may be summarized as follows:

2.1 Establish only positive teaching-learning encounter

A trainee cannot just sit back and learn. He needs, in the first place, a reasonably strong urge to learn. The instructor cannot just come and teach. He, too, needs to plan his teaching. Teaching is successful when learning takes place. A negative reaction, either from the trainee or from the instructor, is detrimental to the success of the teaching-learning encounter.

2.2 Shift to self-directed learning as much as possible

Teaching should be more a matter of drawing out "the desire to learn" than a matter of putting in "content". In every individual there is a natural urge to learn; in fact, it is almost impossible to prevent a normal human being from learning. Even fear is a force that could provide motivation for learning, but in the long run the use of fear as a motivational device may be counter-productive.

In training, we are interested in goal specific and job-related behaviour. Guidance is therefore needed to avoid random behaviour or trial-and-error experience. Guidance, however, is not synonymous with imposition from outside or with authoritarian action. Guidance is to be exercised in a non-authoritarian manner and it should be strategically directed. In the final analysis, it is the behaviour of the trainees that we are interested in changing. For this reason, learning should be an active experience, involving the total individual.

2.3 Establish a two-way equal-basis communication

Telling is not teaching, likewise listening is not learning. It is a sound pedagogical outlook to view the teaching-learning situation as an interaction between equals. It means, among other things, that the learner's reactions should be taken into serious consideration. Where possible, even as early as in the planning phase, the training designer should seek the learner's involvement. Planning with is a more effective strategy than planning for, even when it comes to the teaching-learning situation.

2.4 Be clear and consistent, yet remain open-ended

Training is an organized learning activity. All phases of training, from its specific objectives to the evaluation of its results, should be clearly understood by every individual concerned. There should be a clear and consistent philosophy underlying a training programme. Yet, to avoid being dogmatic, the programme should be kept open-ended. This allows for change and improvement as the training moves along. More importantly, the training programme should be kept alive, creative and innovative. This is particularly true in so far as the curricular programme and its management are concerned.

A good understanding of motivation and how it works to elicit certain types of response, for example, will help the training designer to incorporate various alternative approaches rather than following one single approach and applying it everywhere. Another example is understanding the need for active participation; in this, he should be guided by the fact that the formulation of training needs and objectives should be viewed primarily from the learner's point of view rather than from the designer's.

An understanding of the basic principles underlying learning has practical use for designing training. It would seem reasonable to expect that having this basic knowledge would simplify the task of the training designer considerably and eliminate unnecessary speculation and guessing.

3.0 Developing training plans

In the light of the above mentioned considerations, it is therefore imperative that the training designer establishes effective and efficient conditions for learning, taking psychological, social and physical factors into consideration. The measure of success on his part is the existence of a comprehensive training pattern aimed at facilitating meaningful learning, and on the part of his trainees the development of a pattern of coherent thinking and acting. It is the designer's responsibility to ensure that his trainees are systematically prepared to acquire this pattern.

Sequentially, the development of a training plan may be broken down into three rather distinct stages:

a) preparatory stage;
b) implementation stage;
c) evaluation and follow-up stage.

The three stages will constitute a training cycle. It is, therefore, a matter of importance to draw up a coherent plan embracing all three stages. To be precise, each stage of the plan should indicate the types of activities to be performed, by whom, for what purpose,

and for how long. This will result in the development of a net work of inter-related activities.

A training plan, to be acceptable, should not only be technically and educationally sound, but it should also be economically feasible. The plan, in the final analysis, also serves as the basis for making a list of training needs. This list should be comprehensive, that is, it should show not only the financial needs but the entire spectrum of other instrumental inputs such as facilities, manpower, and curriculum etc. as well.

3.1 Identifying training needs

Essentially, the need for training arises only if a discrepancy is noted or anticipated between the present capabilities of persons already performing certain activities or expected to perform some new activities and the level of performance that should be attained by them. The identification of training needs involves firstly an analysis of the competencies required, and secondly an assessment of the extent to which these competencies are possessed. These two exercises provide the basic data for planning training.

3.2 Existence of adequate institutional support

A training programme can be effective only if it is adequately supported. The types of support needed are many. One type is technical; other are administrative, personnel, financial, infra-structural, social and even political.

The maximum utilization of available non-financial resources is a matter of great importance. Too often, there is a tendency to think of improving a training programme by first seeking more and more money, whereas the problem is not always financial. By increasing efficiency and by making improvements wherever possible, the training establishment should be able to show improved performance without necessarily consuming more money than before. Staff support in particular needs special attention since many aspects of programme operation depend on the enthusiastic participation of staff members.

3.3 Determining training objectives

Training objectives are to be derived from the overall objective or goal of teaching population education. Unless it is known what the output should be, it would be futile to talk about the success or failure of training.

Formulating training objectives, then, is a way of describing the characteristics of the desired output. It is only by using an operational formulation of training objectives that the designer would be able to decide upon performance criteria or measures of success.

Training objectives should be viewed from two points of view, namely that of the trainer and that of the trainee. Consequently, in formulating objectives operationally, the role of each of them needs to be clarified.

Briefly, the following points need consideration:

1. The distinction between what the trainer/instructor should do in carrying out the training programme and what knowledge, skills etc. the trainee should

acquire in order to perform well in the job. The former will represent teacher behaviour, and the latter will be suggestive of the behavioural changes that should take place in the trainees.

2. The selection of what is to be taught and how it should be taught. These are the problems of content and method. Depending on whether knowledge, skills or attitude (or a combination of these) needs to be emphasized in a particular training programme, the trainer will have to formulate his day-to-day instructional objectives. They will serve as a practical guide in the selection of content and methods relevant to the attainment of objectives. Thus, although it is possible (and desirable) to produce a training guide on the basis of the training objectives, the total scope of training content, and perhaps even general guidelines on methods, it is advisable to provide a flexibility permitting adaptation by the instructor at work. The specific method he will use will depend not only on the training content, but also on the audience and the instructor himself. The training objectives then are to be formulated prior to implementation, because, in fact, the training objectives are the foundation of the training. The instructional objectives, on the other hand, need to be worked out in relation to specific and concrete teaching-learning situations.

3.4 Designing training programmes

Designing a training programme is the next logical step after the training objectives are formulated. The programme has to be designed to achieve the objectives that have been decided upon. The programme should be formulated in a manner that will clearly show the three broad areas of concern: the knowledge base, performance skills and attitudes. Depending mainly on the function of each training programme, and the types of people attending it, different types of training programmes should be designed to meet the specific needs of various groups.

It is not possible to execute one standard programme for all types of objectives for all types of people, and expect it to be effective at the same time. In fact, it is impossible to design such a training programme. To be effective! therefore, specific training activities will have to be formulated to ensure that the programme is relevant to a particular situation, for the reason that the training needs for different situations may not be the same. An analysis of the job to be performed provides the basic information for the design of a specific training activity.

On the basis of his knowledge of instructional objectives, the training designer has to assess his needs. He has to determine what is to be done by each group of individuals, the trainer(s) and the trainee(s).

What (and what not) to put in the training activity is a question of determining content appropriate for meeting the objectives. Without explicit guidelines, the designer could run the risk of putting in too much or too little content, or fall into the trap of putting in interesting but irrelevant elements.

To avoid being too arbitrary in content selection, the following factors may be taken into account:

1. Consider every single training objective, by asking this question: What content will effectively help the trainees to achieve this particular objective?
2. Consider the three areas of development: Should content be concentrated on a particular area of development? Or on a combination thereof?
3. Consider the job or task analysis, then this question: How should content be organized sequentially to relate it to the job requirements and to build competence in the most realistic way?
4. Consider all other factors directly related to the training plan: time elements, quality of available human resources, availability of training materials and other facilities, etc.,then - for each of them - pose the following questions: In view of this particular factor what are the best of the alternative approaches to putting content into an organized learning activity?

3.5 Training approaches

By and in itself no particular training method is superior to all other possible methods. Each one has its own merits, its strengths and limitations. The desirability of a particular training method (or of a combination of methods) is a question to be determined in relation to a number of factors:

1. the nature of a specific instructional objective;
2. the situation in which teaching-learning interaction is to take place;
3. the role the learner is expected to play in the training process;
4. the extent of support available in terms of learning materials and facilities;
5. the level of familiarity and mastery of various methods on the part of the training instructor.

In actual practice, the errors or failure in operationalizing a training programme depend largely on the last mentioned factor. It is not uncommon to see teachers using the same approach for practically all sorts of training objectives, in all kinds of learning situations and with all types of audiences. This tendency may be due to the overall traditional climate that is not conducive to change. Or, to the lack of leadership support that encourages the use of new and varied methodologies, or even to the lack of determination on the part of the instructor himself to follow new avenues in the teaching-learning encounter. But more importantly, it could also originate from the lack of knowledge of a great variety of methods.

The wide spectrum of training methods may be categorized in a variety of ways. One useful way of doing this is to make a distinction between:

a) predominantly teacher-directed methods and
b) predominantly student-managed methods.

To be sure, no training method is entirely teacher-directed or student managed. Even in a prepared lecture (as one form of teacher-directed method), it is always possible (and desirable) to outline the role of the student. The application of this approach of specifying the role of both the teacher and the learner for a particular method will aid the training designer to draw up a list of specific activities useful for the proper management and implementation of the training programme. When needed, further refinements could be introduced under the second (student-manager) category as follows.

a) activities to be performed individually;
b) activities to be performed in small groups;
c) activities to be performed in the entire group, indicating further what is to be performed, how and when.

With this type of information in hand, it should be a matter of judgement to decide on the selection and general pattern of the teaching-learning approach to be used. Theoretically and in general terms, the training instructor should be knowledgeable regarding the potential and limitations, and on the technical requirements of a variety of methods such as those listed in chapter 4 section 6.0. The list given there is not exhaustive. In the hands of an inspiring instructor, each method is a new method. He will bring the basic principles to life. It is here that teaching is an art.

4.0 Management aspects

Management of the training is not something that comes only during the actual implementation of the programme. The management of the training is there right from the beginning, from the preparatory stage to the follow-up stage, embracing all important aspects of the plan (programme, personnel, budget, facilities).

In the training set up, the training director is the overall manager. But in the actual teaching-learning situation, the learning managers are the instructors themselves. In a sense, even the trainees can be assigned certain management functions, especially in relation to the use of student-managed learning activities. The manager's primary interest is in institutional efficiency, while that of the instructional manager is instructional efficiency.

The training managers should constantly look for:

a) the potential sources (positive aspects);
b) the potential constraints (negative aspects);

leading to the success or lack of achievement of the programme.

The training manager should always recognize the existence and interplay of both positive and negative aspects. Depending on a specific situation, a particular factor can turn out to be supportive of the programme, but in another situation it can be detrimental to it.

This consideration applies to both human and non-human factors. Therefore, the importance of closely watching the dynamics of this interplay can never be over emphasized.

5.0 Evaluation

Evaluating a training programme is not a simple process, especially if conceived as including pre-training and post-training situations. Many desirable characteristics of the training input have to be evaluated longitudinally.

At any rate, the evaluation should concern itself with questions such as the following:

a) whether or not the plan was well formulated;
b) whether or not the plan was executed properly;
c) whether or not the implementation has been effective and efficient (internal efficiency in respect of content, method, cost, facilities, manpower etc.);
d) whether or not the programme produces the output desired (from the trainees' point of view, whether or not they benefited significantly from the programme).

In any case, there is a need to have some sort of evaluative guideline and this again is to be formulated on the basis of the training objectives. Evaluating the training programme from the manager's point of view is one way of obtaining information for the purpose of diagnostic and decision making processes. But there are other important sources from which the manager should obtain information: the trainees themselves and the consumer of the training output, the school system.

Chapter 3

DEVELOPING A TRAINING PROGRAMME IN POPULATION EDUCATION

Introduction

In this chapter, a general procedure for developing a training programme will be discussed and a few case studies of teacher training programmes in the Asian region will be described. These case studies can provide ideas for developing programmes of teacher training in population education in different countries in the region according to their needs and problems.

The process of developing a training programme has an its focus a situation that calls for effective behaviour on the part of a certain target group. An operational description of the salient features of the job and the behaviour required is needed to develop a training programme. A training programme may be divided into 3 phases, namely

A. Planning;
B. Implementation;
C. Evaluation and Follow-up.

A. Planning

It is important that this stage should be given great attention because the success of training would depend to a considerable extent on efficient planning. All the issues in population education discussed in the preceding chapter should be taken into account in planning a training programme in population education. The following pages describe the general procedure that can be followed in planning a training programme.

1.0 Identifying the Target Group or Groups

The first step in planning is to identify the group or groups of personnel to be trained. This should be done in the light of the needs of the school system and the approach used in including population education in the school system.

A basic issue is whether all teachers should be exposed to population education as part of their educational experience or whether training programmes should be limited to those groups involved in the teaching of population education. On the latter premise, the target groups would include the following categories of teachers.

1.1 If population education is introduced at the elementary level, all elementary school teachers will need training, as teachers at the elementary level are generally required to teach all the subjects.

1.2 If population education materials are added to existing subject areas at the secondary level, all secondary school teachers in these subjects areas will have to be trained. At present social studies, science, health education, home economics, mathematics and language teachers are involved in these programmes.

1.3 If population education is to be taught as a separate subject, a category of specialist population education teachers or

more realistically teachers with population education as a field of their specialization will be needed. A point to be discussed is whether this specialist teacher's original bias or academic discipline should be taken into consideration in selection for training courses.

1.4 School administrators and supervisory personnel whose supportive role is of great importance in the implementation of school education programmes also need an orientation to the subject.

1.5 Curriculum developers and text-book writers constitute an important category. In fact, it is this group who would incorporate population education concepts in the curriculum and text-books.

It may be noted that as many countries have opted so far to use existing courses to teach population education, and some have introduced the subject at the elementary level, the number of teachers to be trained in such countries is very large.

2.0 Identifying training needs

After identifying the target group or groups which need training, their training needs should be determined. The identification of training needs of different target groups is important in order to plan a need-based training programme. Time, money, effort and other resources could be put to the best possible use only if the training is based on needs that are clearly identified.

The process of identifying needs is relatively time consuming in a new area such as population education as it involves the analysis of several related factors. The following are some of the factors which should be considered in identifying training needs.

2.1 Needs of the subject area of population education

In a new subject which has not been a part of the educational experience of teachers, a content analysis of the education programme and curriculum area has first to be made to ascertain th objectives and scope of the programme and, in particular, the knowledge and skills in which the teacher has to acquire competence. Since several disciplines such as demography, economics, ecology, sociology, health etc., bear on population issues the training programme has to encompass several specialities and involve subject specialists in curriculum planning.

2.2 Needs of curriculum development in population education

An analysis of curriculum development patterns in population education in the school curriculum has to be made to identify curriculum needs.

Where population education content is introduced into the elementary school curriculum a programme will be required to familiarize all elementary teachers with relevant concepts and methodologies since elementary school teachers in Asia generally have to teach all subjects in their classes.

In the secondary school most Asian countries have adopted the infusion approach, integrating population education materials into existing related subject areas throughout the school or in specific grades. These subject areas have to be identified and the population related material analysed to see what demands in knowledge and skills are being made on these subject teachers.

A separate course or unit in population education has been favoured by some educators particularly in view of the fact that population education materials lose their significance through dilution and lack of integration when included in many subject areas. Such a course, if structured as the analysis of a social issue or as part of a broader theme such as development, would be multi-disciplinary in content. It would thus require teachers with population education as one of their specialities, or team work on the part of teachers in several subject fields.

The target group to be trained in any country would therefore be very large, and it may even be necessary to consider the possibility of exposing all new entrants to the profession to some population-related materials as a part of their general orientation to the socio-cultural milieu in which they will work.

2.3 Needs of the teacher-learner in a specific cultural and environmental context

The objectives, content and methodology of a teacher education programme will be determined by the needs of those who are to benefit by the programme, the socio-cultural context and the environment, urban or rural as the case may be, in which these programmes operate. Careful investigation will have to be made through surveys or existing studies of:

2.3.1 the needs of would-be teachers - the knowledge, attitudes and skills they have to be equipped with, the nature of the roles they may be called upon to play and their own attitudinal base;

2.3.2 the needs of the students in the school system at elementary and secondary level respectively - their cognitive level, their learning abilities and family background, and the behavioural outcomes expected from a course in population education;

2.3.3 local cultural and social norms, values and attitudes bearing particularly on the sensitive areas on which population education programmes impinge;

2.3.4 national development plans and policies of which population education programmes must be viewed as an integral part;

2.3.5 the environment, urban or rural, in which the teachers have to teach.

2.4 Organizational needs

Several organizational problems arise from the situation that as population education is a new curriculum area training programmes have to cater simultaneously to two groups of teachers, namely those preparing to be teachers and those already in the teaching force. A major problem is that pre-service training programmes do not meet immediate needs, while the number and duration of in-service programmes are limited by the fact that in-service training has to avoid conflict with another on-going process - the school schedule. For further discussion of pre-service training and in-service training, reference may be made to Chapters 4 and 5. A point that may be emphasized here is the importance of orientation courses for administrators and supervisory personnel

to ensure that their understanding and support will be forthcoming and that their administrative functions will be adequately performed.

A major problem in organizing teacher education programmes in population education is the lack of trained teacher educators. Innovations in education are usually monitored by a handful of key educators but in population education there is the further need of the services of resource personnel, and particularly of specialists in related disciplines in a consultative capacity if the academic content of the course is to achieve parity with that of other subject areas. Questions such as who should train these resource personnel and what kind of training programme should be organized for them, are of importance in this connection.

As with other training programmes, population education programmes need to be organized at national as well as local levels according to the administrative structure of the country. While local needs are not opposed to national needs in any country, local variations, sub-cultures, development problems all present challenges to population educators and to educational administrators.

2.5 Administrative and financial needs

Administrative and financial factors should also be taken into account in planning a training programme in population education. They are considerations relevant to any kind of training programme, and it is not necessary to discuss them here. The national, provincial and local institutions which are given the responsibility for organizing training programmes in population education should be competent and experienced enough to assess their needs and handle this aspect of planning efficiently.

Training needs should be categorized in terms of the groups of personnel to be trained, and an order of priority should be established as to what training needs are to be met immediately, and what could be put off for some time. The types of training that will meet the needs should also be identified.

3.0 Designing training programmes

After training needs are clearly identified, the training design or programme should be prepared. A single strategy or a combination of strategies may be chosen. It is wise to break down the general training objectives into specific objectives, such as knowledge, understandings, attitudes and skills. Appropriate content and learning activities should be decided upon in the light of the objectives and the particular model of training that is to be used. The training design should, however, be sufficiently flexible to include any changes thought desirable during the implementation stage.

8. Implementation

Different models of training can be used by different countries to suit their problems, needs and the availability of resources. An effort should be made to follow as far as possible the training design that is decided upon. Changes in the design should be made in the case of unforeseen and unavoidable situations only. A favourable social climate should be provided during the training, so that both the trainers and the trainees would feel free to express their points of view. Such a climate should

lead to successful achievement, personal satisfaction and generate an eagerness to pursue learning even after the course ends.

During the course of the training, assessment should be made of the trainee's progress. Observation schedules, check lists, rating scales, content analysis etc. are possible techniques for use.

A more detailed consideration of the implementation of pre-service and in-service training programmes will be found in Chapters 4, 5 and 6.

C. Evaluation and follow-up

After the training is over, an assessment should be made of the success of training and its impact on the trainees. The effectiveness of the training is determined by three partners - the trainee, the training centre and the school system. The success of the training is determined by the contribution of these three partners towards the attainment of a common goal.

1. Evaluating the training programme

The basic answer to seek after the training programme is concluded is the extent to which the programme has achieved what it set out to do. The programme started with a set of objectives, and by the time it is over, the trainees should have acquired new competencies. Evaluation at the end of the programme can show the new knowledge, skill, attitudes, etc. that the trainees have gained.

The clarification of training needs is hard, painstaking and often slow work. But clear definitions of needs mean clear training objectives. And clear training objectives in turn make for clear evaluation of the effectiveness of training.

2. Evaluating training objectives

The training objectives should be set out in terminal behavioural terms that are measurable, so that a comparison can be made between the entry behaviour of the trainees and their terminal behaviour after the training course ends, using validated measuring instruments for this purpose.

Two important considerations here are:

i) that the initial training objectives are meaningful both in the new behaviours that are to be induced and in how the new behaviour benefits the school programme;

ii) that the measuring instruments are valid and reliable.

If the objectives of the training were clearly defined there is a good chance that the training will be effective. This is especially true when the trainee is sent back to the job from which training objectives were derived. If there is change in needs, they should be communicated to the training centre so that necessary revisions in the training objectives and programme can be made; thus, there should always be a close relationship between the training centre and the school system. In many developing countries this should be given special attention because of the changing situation and changing functions often brought about by organizational policies.

The evaluation of the training objectives is the responsibility of the school system and the training centre. Therefore, there is a need for continuous feedback from the school system regarding the performance of the trainee so that the training centre can benefit from it and make needed changes in the programme design.

3. Evaluating the participants

The school system will be in the best position to determine the effects of training on the participants. This evaluation is necessary so that the trainees and trainers will know if they met their objectives. The regular collection of data can be the responsibility of the school system, while the analysis and interpretation of findings can be carried out by the training centre.

It is important to evaluate the participants because the results will be used as a basis for reviewing, inter alia, the criteria for the selection of the participants. The evaluation may indicate that the training is of greater profit to participants with substantial working experience or with a certain level of competence in the subject.

The focus of training should be on the person on-the-spot in the school system. During the process of training and certainly by the end of the course, the person should hopefully have learned what he can apply in his job. In other words, he should become more effective as a teacher.

Some requirements for a systematic training programme:

i) Provide a programme which is meaningful to the participants and appreciated by them.

ii) Provide time and resources for each participant to convert the training into an active experience for himself/herself.

iii) Help participants deal with new situations as they arise and learn from them.

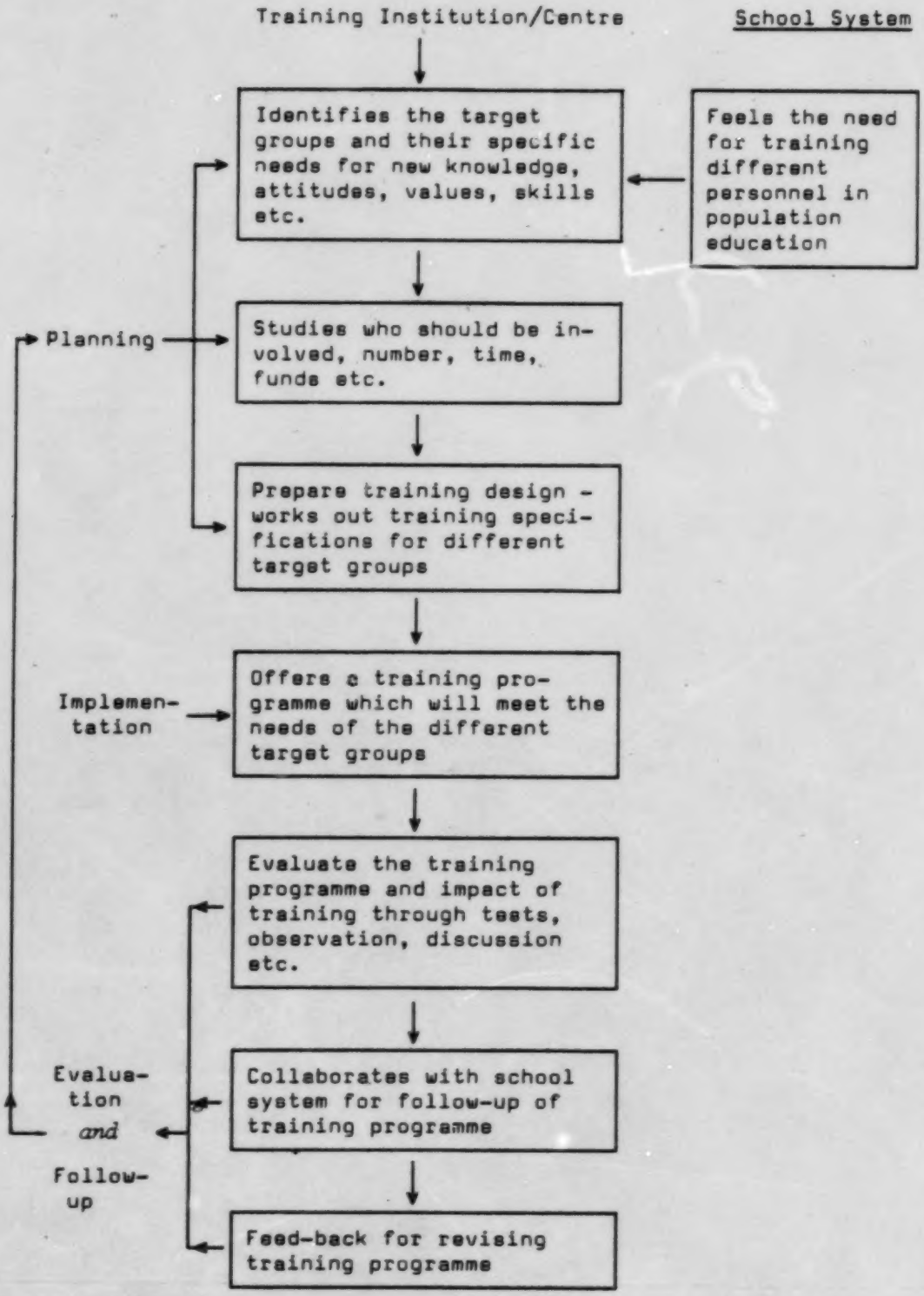
iv) Expose participants to useful ideas and methods from sources outside the organization.

v) Provide opportunity for experimentation and get feedback of the results of the training.

vi) Give participants the experience of belonging to groups in which they can exchange ideas.

vii) Provide intensive experience through a high degree of consistency and training skills.

Steps Involved in Developing a Training Programme in Population Education


Training Institution/Centre
School System
Identifies the target groups and their specific needs for new knowledge, attitudes, values, skills etc.
Feels the need for training different personnel in population education
Planning
Studies who should be involved, number, time, funds etc.
Prepare training design - works out training specifications for different target groups
Implementation
Offers a training programme which will meet the needs of the different target groups
Evaluate the training programme and impact of training through tests, observation, discussion etc.
Evaluation and Follow-up
Collaborates with school system for follow-up of training programme
Feed-back for revising training programme

Case studies of some alternative models of in-service training of teachers

The following case studies of in-service programmes for teachers may provide some ideas for developing training programmes in population education. They present non-traditional models of training, and they have been used in some Asian countries to overcome certain problems in the training of teachers.

1. Correspondence programme (Iran)

a) Background

Despite the great demand for well qualified teachers, school masters and supervisors, many of those at present in service do not have adequate educational background. Large numbers reside in remote areas, and do not have access to higher educational institutions. To meet their needs, the School of Correspondence was established in 1970 for teachers using the correspondence method and other multiple training media.

b) Objectives of the programme and the subjects of study

i) To impart systematic academic instruction to teachers working in the villages and remote districts of the country; to assist them in the implementation of national programmes of education and development and further update their knowledge and skills so as to promote their efficiency.

ii) To provide opportunities of higher education for young teachers who are unable to attend universities on account of their job responsibilities and the remote locations of their residences. The subjects taught are physics and mathematics, chemistry and natural science for the orientation schools, Persian language and literature for teaching at the orientation school, and primary school teaching for supervisors and school masters.

c) Methodology

Instructional materials are skilfully developed by outstanding professors and lecturers. The materials are reviewed and refined by a compilation committee before reproduction and distribution to the students. The students are required to study and learn the contents of the texts according to a prescribed time schedule.

In order to evaluate students' achievement and progress, tests and questions are formulated every month and sent to them. The students are required to supply answers within a stated period of time and return them to the professors and lecturers.

Supplementary materials such as cassette tapes and reference books are sent to the students. A library service is made available through the post.

Residential training through preparatory classes, regional classes during weekends, vacation classes for 10 days and summer

classes for 4 to 6 weeks are provided to remove the deficiencies arising from non-attendance at regular classes.

As a practical exercise, the students are required to carry out an analytical survey of the curriculum and texts in the subjects taught by them in their respective classes and to submit their reports for comments. Also, as practice teaching, they are required to do demonstration teaching during summer classes.

A final assessment of their work is made through an examination at the end of each year.

d) Evaluation

By intensive utilization of the correspondence method and other multiple training media, the programme has introduce a sound alternative structure and method in teacher education which is different from what is practised in traditional teacher training colleges and institutions. Along with updating and promoting teachers' knowledge and skills, this programme has enabled the teachers to acquire a junior college teaching certificate (post diploma) upon completion of 70 units within 3 years; and a B.A. or B.S. degree with additional 70 units completed in two more years.

The programme is very useful because of the large number of teachers who can be trained without being taken away from their work as teachers in the villages and remote districts.

It is also indigenous because it is geared to the needs of the rural schools and national development. It is also considered innovative because it generates creativity and self-reliance among teachers.

The programme is most effective when regular and timely feedback is provided to the students, and residential training classes to supplement the correspondence phase are organized.

The programme requires a team of highly efficient persons for the production of instructional materials. Access to programmed materials is expected to strengthen the instructional methods.

An efficient postal service is very essential for the success of the programme.

The programme is financially viable because the investment made per student is lower than the cost of operating training programmes in regular institutions. The programme is financed entirely by the government.

2. Mobile in-service education (Malaysia)

a) Background

Keeping teachers up-to-date both technically and professionally is a problem that concerns educators in every country.

In Malaysia, there is today a commitment to a kind of agricultural education that did not exist before. A new syllabus now outlines the secondary school agricultural science programme that includes both practical experience and basic theory. Funds have been allocated for the purchase of supplies and equipment to be used in agricultural classes, and teachers are being trained in modern well-equipped facilities. The Ministry of Education is

satisfied with what has been accomplished, but at the same time a need for continuing education is recognized.

b) Objectives

i) To keep teachers up-to-date both technically and professionally.

ii) To implement the new agricultural science syllabus, for the secondary school, which includes both practical experience as well basic theory.

c) Methodology

Intensive programmes are offered to teachers during school holidays.

There is mobile in-service education in which teachers attend week-end courses at selected in-service centres in their respective areas.

The traditional approach of having a large number of teachers assemble during school holidays has been employed successfully in Malaysia in the past. A vocational school with good agricultural facilities has been the setting for two-week sessions covering agronomy, farm management, animal science and farm mechanics. Lecturers have been called in from the teacher training colleges and the vocational schools to teach these intensive classes. Mainly designed to give teachers technical knowledge, these courses have been important in upgrading many inadequately prepared ind ividuals who entered teaching before the revised practical syllabus was evolved.

Mobile in-service training was started as a pilot project in Johore. The aim was to determine whether effective training could be carried out by having small groups of about 25 teachers assemble for week-end sessions. Five locations were selected and lecturers from the Teacher Training College met with these teachers at one of these locations every week-end for five weeks. A second round of instruction was provided, and lecturers again met with these teachers in each of the five centres.

Course content was directed at the immediate needs of the teachers. Areas of need were identified and such topics as lesson planning, teaching methods, budgeting and technical subject matter were discussed.

d) Evaluation

The project is successful, indigenous and sensitive to national needs. It is expected that 155 agricultural science teachers in the secondary schools in Johore State will be reached by these in-service courses twice each year.

The project is quite practicable since on-the-spot training eliminates the need to take the teachers away from their job locations. More importantly, the willingness to work as demonstrated by the lecturers and teachers in preparing for the classes and developing hand-out materials makes the project very viable and welcome.

The project is problem-oriented and adopts a systematic approach towards supplying trained teachers in agricultural science for secondary schools and towards fulfilling the agricultural manpower needs of the nation.

3. On-the-spot teacher training (Nepal)

a) Background

The introduction of the National Education System Plan (NESP) 1971-76 called for a revision and restatement of the objectives of the teacher education programmes in Nepal. Special attention has been given to designing effective methods of co-ordinating and consolidating programmes of teacher education as well as to ways of making these programmes realistic and functional within the context of Nepal's resources and needs.

The vast majority of untrained primary school teachers are to be trained within as short a time as possible. This cannot be done through the present provision for regular in-service teacher training programmes on campus. Hence, the need to extend the training facilities to the area where these untrained primary teachers were serving was clearly perceived.

b) Methodology

This project enables teachers in the primary schools to receive training near the place where they are working. Trainees are are not alienated from their actual work situation. Daily supervised teaching of the trainees after morning classes on professional education is designed not only to help the individual teachers but also to improve their school programmes. The method adopted in this project is an integrated one where practice and theory go side by side.

The training site is located at places from where the participating schools are within a walking distance of about an hour.

The classes are held for two hours a day in the morning, leaving the teacher free to do his regular work from about 10.30 or 11.00 in the morning. In so far as the curriculum is concerned, seven general subjects and 11 special subject areas are covered. This programme involves the District Education Officer who determines the needs of his district and helps manage the centre.

Chapter 4

PRE-SERVICE TRAINING PROGRAMMES IN POPULATION EDUCATION

1.0 Introduction

In common with all forms of initial professional preparation, pre-service teacher education equips the entrant with the preliminary orientation and skills required for a satisfactory performance in an occupational role. It is therefore geared to the academic and professional needs of the "recruit", and the level of a programme has necessarily to correspond to the stage of the education system at which such initiation is sought, i.e. senior secondary, under-graduate, post-graduate or research.

Traditionally pre-service teacher education has been long-term and institution-based and has tended to rely on formal programmes. In the Asian region such institutionalization has imposed a rigidity of structure which has isolated pre-service educational institutions from the mainstream of the educational reforms that have contributed to the overhauling of other units of the education system. The trend has been for educational administrators to by-pass these institutions and to utilize the more flexible and quicker mode of short-term in-service teacher education programmes to meet changing social and educational needs.

This trend has been particularly marked in the field of population education. As a new curriculum area which educators have hoped to introduce extensively into the curriculum, the content and methodology of population education has to reach a large number of teachers as quickly as possible. Educational administrators have generally preferred to organize in-service programmes within the ambit of the Ministry of Education at Curriculum Development Centres, National Research Centres or special local centres to meet this need and consequently pre-service teacher education programmes remain largely undeveloped.

A few countries such as the Philippines and India have, however, made some progress in incorporating population education within the programmes of pre-service teacher education institutions. It is also increasingly recognized now that higher priority should be given to pre-service programmes since they will initiate new entrants to the profession into this field and will continue to be on-going programmes even if the original impetus is lost and enthusiasm diminishes. Their more academic orientation and intensive preparation as well as the incentives they provide in the form of qualifications also make them an effective mode of realizing long-term objectives. They are, in fact, the first step in the recurrent or life-long education of teachers and have, therefore, to be integrated with in-service programmes.

Pre-service programmes must necessarily be geared to the needs of the school and national programmes, and of the education system of each country. Planners have therefore to

i) identify the specific needs of a pre-service teacher education programme in terms of the subject, the education system, the curriculum structure and the personnel needed,

ii) consider and evolve suitable strategies for introducing population education into the content of pre-service programmes, and

iii) formulate courses to meet the needs of the country and devise effective methods of evaluating such courses.

2.0 Selecting suitable strategies for introducing teacher education programmes

In selecting appropriate strategies or approaches for the inclusion of population education in pre-service teacher education the following factors must be considered.

2.1 The "level" of the personnel for whom these programmes are intended

2.1.1 Research workers and teacher educators

In many countries University doctoral and master's programmes meet the need for research workers and key teacher educators.

2.1.2 Elementary teachers and secondary teachers

The three groups of teachers, viz. - population education teachers, subject teachers in related disciplines (e.g. social sciences, natural sciences, health education and home economics) and elementary teachers - would most likely receive their professional education in

i) University Faculties of Education, Colleges of Education or Departments of Education which offer four year Bachelor of Education courses (concurrent courses) or one year post-graduate education courses (consecutive courses) such as the Diploma in Education or the degree of Bachelor of Teaching.

or ii) Teacher's Colleges which offer 2 or 1 year professional certificate courses (concurrent courses) in one unified institution or in separate institutions for prospective elementary and secondary teachers who have not qualified for or not sought entry to Universities.

Countries differ in the extent and type of teacher education facilities offered at each level. At the same time there are also alternative strategies which could be employed to meet special needs. Such non-formal programmes could be linked to the programme of an institution or could operate independently and be monitored by Ministries of Education.

Among such courses suited to pre-service training needs in geographic regions remote from these institutions or in circumstances where lack of accommodation and facilities preclude the reaching of an adequate number of teachers are:

i) Correspondence courses or distance teaching interspersed with short residential seminar/workshops at teacher education institutions or independent training centres;

ii) Vacation courses staggered over a few years;

iii) Mobile training centres in remote areas.

These courses may offer a parallel programme to that offered by teacher education institutions in "instalments" thereby enhancing their value in social and economic terms or they may organize a programme with a different orientation.

2.2 The broad training needs in conceptual and methodological areas

The following are some conceptual and methodological needs of teachers:

2.2.1 As population education is a new curriculum area the knowledge base of the teacher has to be strengthened and comprehensive information provided to enable the teacher to present population-related curriculum materials adequately. As this knowledge component is drawn from many disciplines, curriculum planning in this area requires the identification of these subject areas and the co-operation of specialists in different disciplines whose services could be obtained from the universities, specialized institutions and extension agencies as resource personnel. These disciplines range from the social and behavioural sciences - demography, economics, sociology, development studies, history, political science, geography, and psychology to the natural sciences - biology, ecology - and health and nutrition, medicine, home economics and family planning, and even languages. University programmes are relatively easy to organize as they could use expertise available in the various Departments and Faculties for the teaching programme.

2.2.2 In a new and controversial field such as population education, the teacher's motivation and positive response as well as his awareness of the objectives of the school programme become crucial to the success of the teaching programme. An orientation course therefore needs to be structured so as to deal with all the issues and constraints that are associated with the subject.

2.2.3 Population education is unlikely to be a major area of specialization such as educational planning or curriculum development, and teacher educators and population education teachers will probably teach population content in addition to other subject areas. The role of specialization in population education will have to be examined in relation to the total curriculum of the University Faculties of Education and Teacher's Colleges and in national perspective. Nevertheless each country needs a few specialist and key personnel for developing programmes, and the question as to whether the country can afford such a course or whether a doctoral or master's programme in population education could be organized at a regional centre has to be determined.

3.0 Strategies for introducing population education in teacher education programmes

Several alternative strategies could emerge from 2.1 and 2.2. The following possible approaches to include courses in population education are explored here for discussion.

3.1 Infusion into existing courses

Some reservations have already been expressed by a few educators with regard to the usefulness of the infusion technique

as used now to introduce population education materials into the school curriculum. Such reservations would, however, have added force in a teacher education curriculum as concepts would be dispersed and lost among areas such as Educational Psychology, Comparative Education and School Administration, while larger inputs would distort the particular discipline and rouse strong objections from those handling these areas. Infusion may be possible in methodology courses where the school curriculum incorporates population education materials in the specific subject areas and where the prospective teacher has to explore techniques of presenting these materials appropriately but within the framework of the subject methodology course. Such courses would be in social sciences, science, health education and home economics methodology.

3.2 Unit in an academic course

The possibility of introducing a unit in "population awareness" or "population studies" at the undergraduate level in order to provide an adequate knowledge base for would-be teachers could be explored. The University has resources and teaching personnel in various departments to provide such a course, and the academic orientation to deal with conceptual issues in some depth. In order to enable all prospective teachers to be exposed to such a course - i.e. both Bachelor of Education students (concurrent patterns) and students reading for other degrees in arts and science who may proceed to a post-graduate education course (consecutive pattern), and, in fact, to expose all undergraduates to these concepts, a course unit on population issues could be introduced into the Foundation course in the first or even second year. Such a course unit should be presented as a part of a course on Development so that the total perspective may not get distorted.

3.3 Unit in a professional course

In contrast to the technique of infusing several professional courses with population education content, it may be possible to explore avenues of including a unit in one professional course. Most teacher education programme have a broad-based subject which varies in nomenclature but which is analogous to a course in Problems in Education or Contemporary Issues in Education or Social Foundations of Education. Such courses generally consist of a conglomeration of topics, and a unit on population education with its strong contemporary bias and its socio-economic and environmental implications may appropriately find a place in one of these. A small unit would suffice for a University B.Ed. or post-graduate Diploma course as students have already been exposed to population-related content in their first or second year. A one-year post-graduate course with its overcrowded programme, in fact, can offer little more than some seminar-based classes to orientate teachers to the objectives and scope of population education, and problems relating to the school population education programme. Teacher's colleges with their longer two year courses may be able to provide a longer unit which would include both orientation and knowledge since this course has to introduce students to this field.

3.4 A separate elective (optional) course

Teachers who select population education as one of their areas of specialization have obviously to be offered a separate course parallel to other electives. The length of the course has to be determined in relation to the total curriculum but such elective courses are generally of a term's duration. This course would be relatively comprehensive in that it would include all aspects of the subject - orientation, knowledge base, and population education curriculum and methodology in schools. A separate course of this nature has already been offered in B.Ed. and post-graduate courses in some countries, and it may be necessary to introduce such a course into Teacher's Colleges, too.

3.5 A separate elective course for post-graduate degrees

Intending population education "specialists" e.g. teacher educators, curriculum development specialists, may wish to make an in-depth study of the subject and engage in a research project in this field. Courses leading to the Master's degree in Education or its equivalent provide for one or more optional areas of specialization, and a course in population education could draw on the expertise of a number of University departments for its academic content, and the required dissertation in this field will provide the necessary research orientation.

3.6 Other strategies for the inclusion of population education material could be explored including non-formal programmes and community-based projects.

4.0 Suggested courses

Outlines are presented below for the following courses which could form a regular component of pre-service teacher education. Instructional methodology is discussed in 5.0, and evaluation and feed-back in 6.0.

1. Population issues unit in a foundation course for under-graduates;
2. Population education course (elective);
3. Unit on population issues for B.Ed. and M.Ed.;
4. Separate course on curriculum development and methodology in population education;
5. Unit on curriculum development and methodology in population education in subject methodology courses;
6. Unit on curriculum development and methodology in population education in elementary teacher training schools;
7. Population education elective and research-oriented courses M.A./M.Ed.;
8. Non-formal programmes.

4.1 Population issues unit in a foundation course for under-graduates

Target group: Required course for all first or second year under-graduates (which include B.Ed. students and prospective teachers following other degree courses).

Institution: University-based, and taught probably by the Faculty of Social Sciences or Arts as a part of a Development-oriented course or by a Development Studies Unit or a Population Studies Unit.

Duration: 15-25 hour course unit in one year's Foundation course.

Objectives:

1. to understand, interpret and analyse concepts relating to population and population phenomena;
2. to understand the population situation and population issues in global perspective;
3. to create awareness of population problems in his own country;
4. to understand the role of population in the development process;
5. to understand the nature and process of social changes;
6. to analyze national population policies;
7. to develop a sensitive awareness to population issues affecting the individual, family and society;
8. to develop skills in evaluating and weighing alternatives and making responsible decisions;
9. to foster interest among under-graduate students in community problems and projects.

Contents:

1. Population dynamics as a part of the total social and economic development process, presented in global perspective with reference to both developed and developing countries and with particular reference to the national context.
   - i) Size, growth, composition and distribution of population; fertility, mortality and migration trends.
   - ii) Inter-relationship between population and social and economic development, health, ecology and family welfare.
     - a) Determinants of population change in the past and present - e.g., socio-cultural values, industrialization, standard of living, educational opportunities, participation of women in the labour force, age of marriage, immigration and emigration.
     - b) Consequences of population change - population as an important variable in socio-economic development i.e. implications of population increase for economic growth, per capita national income, food supply, housing, educational facilities, health and nutrition, employment, natural resources, environment, family welfare.

iii) Population-related problems in developed and developing countries e.g. dependency burden, unemployment, utilization of natural resources, environmental problems (e.g. pollution).

iv) Population dynamics as a factor in the development process of own country.

2. Population policies and programmes

i) World trends - UN statements, World Population Year Plan of Action (Bucharest), Pro-natalist and anti-natalist policies in context. Critical evaluation of concepts such as quality of life, family size norm, zero growth. Legislation. Family planning programmes.

ii) Population policy as a part of national development programmes.

iii) National population policies and programmes - objectives, expected outcomes, constraints.

4.2 Population Education Course (Elective)

Target group: Students following a Bachelor of Education course or a one-year post-graduate professional course in education (after 3 year academic course leading to a degree).

Institution: University Faculty/College/Department of Education with assistance of personnel from

i) other University Faculties/Departments;

ii) Curriculum Development Centre/National Research Centre, Ministry of Education;

iii) Extension Units of Government Departments or voluntary agencies working in this field.

Duration: one year.

Objectives:

1. to motivate teachers to ensure their co-operation, and to create a climate of acceptance of the subject.

2. to develop a sensitive awareness of the socio-cultural value system, social and economic background, the process of social change, individual and social interaction in family life.

3. to equip teachers with the knowledge base to:

i) understand, interpret and analyze concepts relating to population and population phenomena;

ii) understand population situations and issues in global perspective and in own country, and in relation to the total development process;

iii) be aware of family planning concepts and programmes;

iv) analyze national population policies.

4. to enable teachers to:
   i) understand and clarify the aims and objectives of population education in relation to national goals and changing needs;
   ii) examine concepts associated with the programme e.g. equality of life, family size norm;
   iii) evaluate current programmes in population education and strategies for implementing population education courses in the curriculum;
5. to equip teachers with fundamental skills, attitudes, and knowledge to help them to act as agents of change;
6. to develop awareness of the role of the teacher in the community and to facilitate a closer relationship be between school and community;
7. to develop skills to undertake surveys of learners' needs, community perceptions of population issues etc;
8. to develop skills in the use and interpretation of data;
9. to enable the teacher to gain competence in:
   i) preparing curriculum materials;
   ii) using curriculum materials;
   iii) using effective learning-teaching methodologies;
   iv) preparing and using instructional aids;
   v) devising appropriate evaluation techniques;
   vi) utilizing resources outside the school, and informal and non-formal agencies;
10. to develop skills in integrating meaningfully multi-disciplinary materials;
11. to develop skills in using problem-solving techniques successfully;
12. to help teachers to make use of team teaching techniques.

Content:

I. Orientation to population education

1. Concept of population education - definitions, objectives of educational programme e.g.
   i) to create population awareness
   ii) to promote responsible decision-making as adults regarding population issues.
2. Issues in population education (Refer also to Chapter 2 section 2.0.)
   i) Content areas - what to include;
   ii) Cultural/religious resistance to sex education, changes in family size norms;
   iii) Psychological implications of promoting small family norm among children;

iv) Problems of plural societies and sensitive ethnic and religious groups;

v) Different perceptions of importance of population in socio-economic development as focussed in population education programmes;

vi) Use of concepts such as quality of life and small family norm as behavioural outcomes;

vii) Suspicion of alien norms and concepts.

3. Population education programme in schools

i) Structure, mode of inclusion, levels in education system at which instruction is provided, local variations;

ii) Possible alternatives;

iii) Practices in other countries;

iv) Integration of population education with education programme and development programme;

v) Teacher's role in population education programmes.

II. <u>Population dynamics and policies</u>

1. Population dynamics as a part of the total social and economic development process in global perspective with reference to both developed and developing countries and with particular reference to the national context of each country. Case studies of different countries to be presented to illustrate inter-relationship between population and socio-economic development, e.g.

i) determinants of population change in

a) an industrialized country;

b) an economically developing country with a rapid growth rate;

c) an economically developing country with a slow growth rate;

ii) consequences of population change with reference to the role of other variables in

a) an economically developing country;

b) an affluent industrialized country;

iii) population and development in own country.

2. Population policies and programmes

i) world trends - UN statements, World Population Year Plan of Action; pro-natalist and anti-natalist policies in their context; concepts such as quality of life, zero growth, family size norm. Legislation. Family planning programmes;

ii) population policy as a part of national development programmes;

iii) national population policies - objectives, expected outcomes, constraints.

III. Curriculum Development and Methodology

1. Investigation of needs and psychological, social and cultural background of

   i) elementary school students;

   ii) secondary school students

   iii) relevant to population education.

2. Evaluation of existing programme and materials - analysis of strengths and weaknesses in regard to integration, relevance, and content;

3. Identification of content areas included in population education courses - e.g. social sciences, natural sciences, health education; e.g.

   social sciences - population situation and changes; population policies and national development;

   natural sciences - reproductive patterns of living organisms and man; the ecosystem;

   health education - human reproductive system; family size and health.

4. Preparation of curriculum materials, specifying objectives and content in sequence for each grade;

5. Use of materials and instructional aids and appropriate learning - teaching methodologies e.g. discovery method, activity centred method, group study method, team teaching, micro-teaching, role-playing, simulation, programmed instruction, surveys, discussion, use of audio-visual materials, use of mass media;

6. Study and preparation of evaluation instruments - objective tests, situational tests, questionnaires, check lists, attitude scales, projective techniques;

7. Practical assignment

   i) School practice e.g. work with a group of schools and experiment with alternative approaches and materials;

   ii) Community-based project.

4.3 Unit on population issues in course on social foundations problems in education contemporary issues in education/any similar course (required course)

Target group: All students preparing for the Bachelor of Education degree and all students following a one-year post-graduate professional course in education after a degree.

Institution: University Faculty/College/Department of Education.

Duration: 15 - 20 hours.

Objectives:

1. to understand the interrelationship between population and socio-economic development in the past and present in global and national perspective respectively;
2. to identify current population-related issues;
3. to analyze population policies in own country and elsewhere;
4. to create awareness of the socio-cultural milieu in which population policies and programmes operate;
5. to examine the population education programme in schools in relation to national goals and values;
6. to develop awareness of the role of the teacher in dealing with social and community problems.

Contents:

1. Analysis of interrelationship between population and socio-economic development assessing the relative

ducing population education into schools, and existing curriculum and instructional materials;

4. to develop awareness of the role of the teacher in the community and to facilitate a closer relationship between school and community;
5. to develop skills in integrating meaningfully materials drawn from several disciplines;
6. to develop skills in using problem solving techniques successfully;
7. to help teachers to use team teaching techniques effectively;
8. to enable teachers to gain competence in
   - i) preparing curriculum materials for schools;
   - ii) using curriculum materials;
   - iii) using effective and appropriate learning-teaching methodologies;
   - iv) preparing and using instructional aids;
   - v) devising suitable evaluation techniques;
   - vi) utilizing resources outside the school, and informal and non-formal agencies.

Contents:

1. Population education in schools
   - i) The concept of population education - its implications for economic, social and cultural change;
   - ii) objectives of teaching population education in schools - e.g. (a) population awareness; (b) problem solving; and (c) responsible decision-making as an adult;
   - iii) evaluation of existing programmes and materials;
   - iv) population education in other countries.
2. Investigation of needs and psychological, social and cultural background of
   - i) elementary school students;
   - ii) secondary school students.
3. Identification of content areas included in population education course i.e.

   social sciences - population situation and changes; population policies and national development;

   natural sciences - reproductive patterns of living organism and man; the ecosystem;

   health education - human reproductive system; family size and health.

4. Preparation of curriculum materials, specifying objectives and content in sequence for each grade;

5. Use of materials and instructional aids and appropriate learning-teaching methodologies - e.g. as in 4.2;
6. Study and preparation of evaluation instruments as in 4.2;
7. Practical assignment;
   i) school practice;
   ii) community based project/school survey.

4.5 Unit on curriculum development and methodology in population education as part of a subject methodology course

Target group: Students who follow a Bachelor of Education course or one-year post-graduate professional course in Education and who teach social sciences, natural science or health education in schools which have adopted the infusion approach in introducing population education in schools.

Institution: University Faculties/Colleges/Departments of Education, or equivalent institutions.

Duration: 10-15 hours in a methodology course.

Objectives:

1. to understand the aims and objectives of population education in relation to national goals and in the cultural setting;
2. to evaluate programme and strategies and population education curriculum materials and aids in special subject area;
3. to understand the contribution that the special subject concerned can make to the teaching of population education;
4. to develop skills in presenting population education content within the integrated subject methodology framework;
5. to enable the teacher to gain competence in
   i) preparing population education curriculum materials for schools in special subject area;
   ii) using curriculum materials;
   iii) using effective and appropriate learning-teaching methodologies;
   iv) preparing and using instructional aids;
   v) devising suitable evaluation instruments;
   vi) utilizing resources outside the school, and informal and non-formal agencies.

Content:

1. Population education in the school curriculum
   i) its objectives - population awareness and responsible decision-making as adults with regard to population issues;

ii) organization and scope of subject;

iii) evaluation of existing materials.

2. Needs and background of student;

3. Identification of content area in population education which will be included in subject course e.g.

   Social sciences - population situation and changes; population policies and national development;

   Natural sciences - reproductive patterns of living organisms and man; the ecosystem;

   Health education - human reproductive system; family size and health;

4. Preparation of curriculum materials specifying objectives, and content in sequence for each grade;

5. Use of materials and instructional aids and appropriate learning-teaching methodologies e.g. as in 4.2;

6. Study and preparation of evaluation instruments as in 4.2;

7. School practice.

4.6 Unit on curriculum development and methodology in population education in teacher training schools

Target group: Students enrolled in Teacher's Colleges and preparing to teach in elementary schools.

Institution: Teacher's Colleges

Duration: 25-35 hours in 2 year course in curriculum development and methodology.

Objectives:

1. to understand the aims and objectives of the population education programme in schools;

2. to understand the cultural, social and economic background of the learner;

3. to understand the psychological needs, and the conceptual and affective development of the elementary school child;

4. to equip teachers with skills and attitudes to help them to act as agents of change;

5. to develop in teachers an awareness of their role in the community, and to facilitate a closer relationship between school and community;

6. to evaluate current programmes and curriculum, and instructional materials in the light of the needs and abilities of the elementary school child at different levels;

7. to develop skills in integrating meaningfully materials drawn from several disciplines, and using problem solving techniques;

8. to enable the teacher to gain competence in

   i) preparing curriculum materials for elementary schools;

   ii) using curriculum materials;

   iii) using effective and appropriate learning-teaching methodologies in the elementary school;

   iv) preparing and using instructional aids;

   v) devising suitable evaluation instruments;

   vi) utilizing resources outside the school and informal and non-formal agencies.

Content:

1. Objectives of teaching population education in schools - population awareness and responsible decision-making as adults regarding population issues;
2. Investigation of psychological needs, and the social and cultural background of the elementary school child;
3. Evaluation of existing elementary school programmes and materials;
4. Identification of content areas included in population education - in environment and social studies and health;
5. Preparation of curriculum materials specifying objectives, and content in sequence for each unit;
6. Use of materials and instructional aids and appropriate learning-teaching methodologies as in 4.2 and geared to meet the needs of elementary school children;
7. Preparation of appropriate evaluation instruments.
8. Practical assignment

   i) School practice;

   ii) Study of a group of children or group of schools to investigate what population education concepts are appropriate for the elementary school level.

5.0 Special courses

5.1 Population education elective and research-oriented course - M.A./M.Ed.

Target group: Students who follow M.A./M.Ed. courses and wish to take this course and become teacher-educators/curriculum development specialists.

Institutions: University Faculties/Colleges/Departments of Education or equivalent institutions.

Duration: One year - elective course.

Objectives:

1. to promote specialization in population education among a small group of would-be teacher educators and curriculum development specialists;

2. to strengthen their knowledge base further and enable them to acquire a deeper understanding of population education concepts, issues and population related research;
3. to develop competence in the evaluation of population education programmes;
4. to promote research-oriented studies in population education and to develop research skills;
5. to help develop leadership in population education programmes.

Content:

1. Population dynamics - content on similar lines to that in 4.1 with use of -
   i) Case studies from countries to illustrate the different facets of
      a) the relationship between population and development;
      b) population-related issues;
   ii) Relevant research studies in
      a) population studies;
      b) development;
      c) environmental studies;
      d) sociological studies;
      e) studies relating to family life and welfare;
   iii) Policy statements and documents - national, from other countries and international.
2. Population Education
   i) study of national programmes of different countries;
   ii) analysis of views of population educators;
   iii) investigation of cultural, socio-economic and political factors affecting population education programmes;
   iv) evaluation of existing programmes - objectives, organization, content and methodology;
   v) exploration of alternative strategies, approaches, methods;
   vi) preparation of curriculum materials, instructional aids and resource materials, source books.
3. Dissertation/Thesis: a research study on any aspect of population education e.g.
   i) conceptual, cultural, practical issues;
   ii) action research e.g. behavioural modification, socialization;
   iii) developing source, teaching and ancillary materials.

5.2 Non-formal programmes

5.2.1 1. Correspondence courses with residential seminars;

2. Vacation courses;

3. Mobile training courses;

Target group: Prospective teachers of population education who live in areas remote from teacher education centres or who cannot join a regular training course.

Institution:

1. University Faculties of Education or equivalent institutions;

2. Teacher's Colleges;

3. Ministries of Education - Curriculum Development Centres, National Research Centres or regional or local centres;

4. Continuing Education Centres;

Vacation and mobile training courses as well as residential seminars/workshops will be organized using resources both within teacher education institutions and outside with flexibility and with special measures to encourage student participation.

Duration:

Staggered over 3 to 5 years if they lead to degree, diploma or professional certificate.

Objectives:

To enable those who are unable to enter teacher education institutions through lack of accommodation facilities or those who live in remote areas where there are teacher shortages, to benefit from a pre-service teacher education course with similar objectives and content as outlined under 4.0 and with appropriate methodologies.

Content:

Same content as outlined under 4.0 relevant to course selected in "instalments".

5.2.2 Short term courses

These can be organized to meet special needs such as the need for teachers in a particular area or for a particular grade within a short space of time. Content would be similar to that indicated for in-service courses.

6.0 Instructional Methodologies

A range of methodologies is indicated below for use in training programmes in population education. They are intended to be suggestive, and teacher educators would no doubt select from among them to meet their particular needs. The list is by no means exhaustive, and some teacher educators would have in their repertoire other methods as well. They would also do well to emphasize those methods which can in turn be used by the teachers in training when they go back to their own schools. It

must be remembered in this connection that physical conditions in some schools such as class size, lack of library facilities, the noise coming from other classrooms, shortages of furniture limit the range of methods that can in fact be used.

1. Lectures and lecture-discussions.
2. Student seminars; group discussions; panel discussions; debates.
3. Projects; individual assignments; research studies and reports.
4. Field work and surveys, using questionnaires and interviews.
5. Workshops for the preparation of teaching materials, audio-visual aids and evaluation instruments.
6. Case studies.
7. Role playing; socio-drama; simulation.
8. Value clarification strategies.
9. Brain storming; buzz sessions.
10. Team teaching.
11. Peer teaching.
12. Practice teaching.
13. Library reference work.
14. Films, film-strips and other audio-visual aids.

7.0 Follow-up activities, evaluation and feedback

Reference is requested to Chapter 6.

Chapter 5

IN-SERVICE TRAINING PROGRAMMES IN POPULATION EDUCATION

1.0 Introduction

Any new curricular programme that is to be introduced into the educational system extensively and within a short period of time immediately brings to the forefront the issue of in-service training. Most Asian countries have introduced population education with a great sense of urgency, and they are committed to its diffusion on a nation-wide scale. This task requires for its successful realization the support of school administrators and the participation of a large mass of teachers, who have to be trained essentially through in-service training programmes, as the flow of teachers into the educational system through pre-service programmes is necessarily a slow process.

A number of target groups needing orientation/training programmes are listed below and their requirements in this regard are indicated. By an orientation programme is meant a less rigorous programme, both from the point of view of the duration of the programme and its depth, than a training programme.

2.0 Target groups

Categories needing orientation:

1. Administrators such as presidents or deans of Universities and Colleges, school administrators such as Superintendents, Education Officers and Heads of Schools;
2. School supervisors such as subject supervisors and general education supervisors, subject co-ordinators.

Categories needing training:

1. Population education specialists who will play a leadership role in their country's population education activities;
2. University or college personnel in charge of the training of teachers;
3. High school teachers with responsibility for subject in which population concepts are to be included;
4. Elementary school teachers; middle or junior school teachers.

3.0 Identifying training needs

The in-service training needs of these various groups s should be identified. One method is to survey a representative sample of each target group, and to analyze the data obtained.

Another approach in identifying needs is to hold a conference/workshop with participants from the different target groups. After a brief orientation to population education, the participants should be able to identify and list their needs and problems related to population education. Some of these needs and problems may be based on their observations and experiences regarding the population situation.

In general, the needs of school heads or administrators and supervisors are likely to be different from those of teachers. The school administrators, supervisors and co-ordinators may be provided with a short orientation programme to help them to understand the population situation and issues as well as their role in the total population education programme. The purpose of the orientation is to build initial acceptance and enlist continuing support for the programme.

Common training needs can be generally categorized under knowledge base, skills and pedagogical approaches required in introducing population education in the schools, and skills in planning, implementing and follow-up activities in population education.

The training instructors and classroom teachers in population education may need a more intensive in-service programme than school administrators.

4.0 Modalities for in-service training

Several modalities are presented below for providing the training needed by various groups. The suggested approaches may require intensive full-time study, a series of short periods of training or a one day training which is in the form of an orientation. The in-service training models presented here are for school heads, supervisors, co-ordinators and teachers. Some modalities of short-term in-service training in population education are as follows:

Model	I	Phased Training Model conducted by the Ministry of Education
Model	II	Structured Training Model conducted by the University or Teacher Education College
Model	III	Mobile In-service Training Model
Model	IV	Correspondence Course Model
Model	V	Mass Media and Self-learning Model
Model	VI	Informal Training Model.

If the school programme in population education is to be a well-articulated one in the sense that material included in one subject in a grade is articulated horizontally (with the material included in other subject in the same grade), and vertically (with the lower and upper grades), care must be taken to see that teachers are trained and deployed in such a manner that the intended articulation is maintained and that there are no discontinuities that would tend to nullify it. To put it in other words, when population education is introduced in a school, there must be a sufficient number of teachers to ensure the intended articulation. In many contexts, a combination of the above models may be needed to achieve this objective.

4.1 Model I - Phased training model

In-service training programmes in population education have generally to be phased, as they cannot be conducted for all at the same time owing to the shortage of training personnel and the large number of persons to be trained. The first group to be reached will usually be the heads of schools, colleges and/or universities

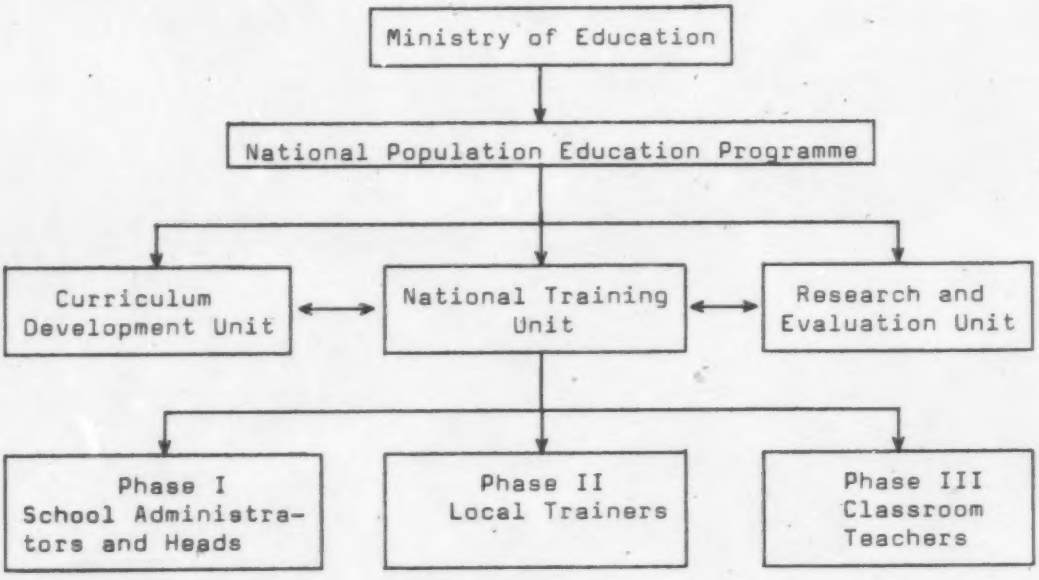
at the national and local levels. This group, of course, bears the over-all responsibility for the curricular programmes of their institutions.

The next group to be trained will be the local training instructors. They are the principals, the supervisors and co-ordinators. This group will be responsible for training the classroom teachers in an area.

This model may be adopted by countries where they have a Ministry of Education which has a department or division responsible for Population Education or a unit for Teacher Education which is responsible for providing in-service education for teachers at the different academic levels.

This model can be used at the national as well as at the provincial levels depending upon whether education is centralized or decentralized or has elements of both.

A possible organizational pattern for this model is shown below:



Model I

Phased In-Service Training Scheme in Population Education.

The Curriculum Development Unit will take care of designing a curriculum and developing and producing all the training materials needed. Examples of these materials are background materials, curricular materials, instructional aids, etc. The Training Unit will be responsible for organizing the training courses. The Research and Evaluation Unit will carry out research and evaluation activities related to the materials produced and the training programmes. They will also conduct research and evaluation bearing on the follow-up activities of the training programme.

The different phases of the training programme may be listed as follows:

Training of programme staff

4.1.1 Short-term training

Target-group: Programme and support staff at the national or state level.

Duration: 6 - 8 weeks

Goal: To train a corps of persons who could take charge of curriculum and materials development, training, and research and evaluation activities.

Objectives: As in Chapter 4 Section 4.5 or 4.6.

Organization/institutions:

1. Unesco Mobile Team - or international roving team which travels from country to country giving 6-8 weeks of training, in association with national institutions, to groups of 25 to 40 persons.
2. Regional centres.
3. Universities where good population-related teaching resources are available.

4.1.2 Long-term training

Target group: Educators who have already undergone short-term training (4.1.1) and have the competence to undergo further professional training.

Goal: To train a category of population education specialists who will play a leadership role in their country's population education activities.

Duration: 1 - 2 years' training in population education for the master's degree.

Institution: Since the number of persons required in this category is small, a programme might be established in an institution in one country in the region. International funding would be needed to support students from the entire region, and also to pay visiting faculty members from other countries.

This training programme could have 3 phases - firstly, in association with a teacher education college or faculty of education; secondly, a population or demography institute; and thirdly, a national population education programme.

4.1.3 Phase I - orientation of school heads at the national and local levels

Target groups:

1. School superintendents.
2. Presidents and/or Deans of Universities and/or Colleges.
3. Principals and other school-heads (50-60 persons).

Goal: To orient school heads to population programme and activities at the local and national levels as well as international level in order to get their support and co-operation.

Objectives:

1. To develop awareness of population situation, issues and problems;
2. To understand the role of education in dealing with population situation;
3. To understand and support the national population education programme;
4. To motivate the public to support and extend their co-operation to the population education programme.

Duration: 1-2 days

Content:

1. Population situation in the country.
2. Population change and national development.
3. Population education: response to a challenge.
4. Role of administrators in the national population education programme.

4.1.4 Phase II - Training of local instructors

This will be intensive training for trainers of teachers. They should be highly motivated and convinced about the necessity and importance of population education.

Target groups:

1. School supervisors.
2. Subject specialist supervisors.
3. Co-ordinators.

Goals: To produce a corps of competent training instructors or trainers at the local level.

Objectives:

1. To develop population awareness;
2. To understand the interrelationships between population trends and the various aspects of human life;
3. To understand the biological factors and phenomenon of reproduction;
4. To understand the problems and strategies for curriculum development in population education;
5. To acquire the knowledge, attitudes and skills for planning, implementing and following up the training programmes for teachers (Phase III).

Duration: 3-4 weeks.

Content:

1. Growth of population and the role of education.
2. Population trends.
3. Determinants of population growth.
4. Population and quality of life.
5. Human reproduction and family planning.

6. Population policies and programmes of own country and other countries.
7. A conceptual framework for developing a knowledge base for population education.
8. Problems and strategies for curriculum development in population education.
9. Principles of teaching and integrating population education.
10. Adult psychology and learning.
11. Organization, implementation and follow-up of the teacher's training programmes.

4.1.5 Phase III - Training programmes for class teachers

The teachers are key persons in the teaching of population education to students. This training programme should stress the content as well as the methods of teaching population education.

Target group:

1. Teachers in the primary grades.
2. Teachers in the intermediate or middle level grades.
3. Teachers in the high school teaching subjects related to population education.

Goal: To provide instruction on population education for teachers in elementary and high schools so that they can effectively teach their pupils.

Objectives:

1. To develop population awareness;
2. To understand the interrelationship of population change and various aspects of human life;
3. To understand the biological factors and phenomenon of reproduction;
4. To identify the various population concepts which are integrated or infused with the existing curricular programme at the different grade levels;
5. To develop skills for integrating population concepts with the existing curriculum;
6. To develop skills and competencies for teaching population education, and evaluating the progress of pupils;
7. To develop skills for effectively using instructional aids to population education.

Duration: 5-10 days.

Content:

1. Growth of population and role of education.
2. Population and quality of life.
3. Simple demographic indices.
4. Human reproduction and family planning.

5. National population education training scheme.
6. Methods of teaching adults.
7. Population concepts and how to integrate them with the existing school curriculum.
8. Principles and methods of teaching population education.
9. Preparation of sample lesson plans.
10. Preparation of sample instructional aids.
11. Demonstration of some population education lessons.
12. Methods of evaluation.

/The scope and depth of the content would differ according to the target group and duration of the course/

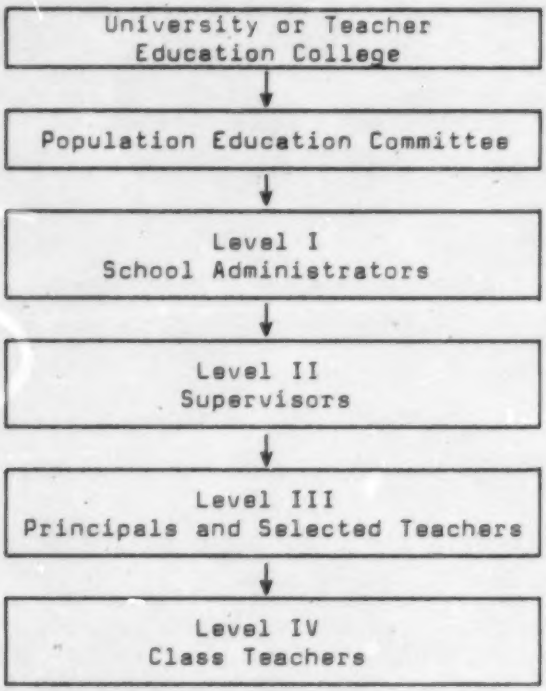
4.2 Model II - Structured training model conducted by the university or teacher college

In a few countries in the Asian region, the in-service training programme in population education is conducted by universities or teacher education colleges. In some universities or colleges, there is a department for continuing education which is responsible for implementing in-service training programmes such as population education. There are faculty members in the department who are assigned to plan, implement and follow-up training programmes.

The various groups that may be provided such training programmes in population education are:

1. Administrative personnel;
2. Training instructors;
3. Classroom teachers.

This model can be used separately as well as in combination with Model I. The courses for different target groups in this model would be more or less the same as given in Model I.



Model II

Structured In-Service Training Scheme conducted by University of Teacher Education College

4.3 Model III - Mobile in-service training model

Another model which can be adopted to provide in-service training in population education to teachers is the use of Mobile In-Service Teams. The Mobile Teams give on the spot training to teachers in their schools or in a designated training centre in the area. These terms can be organized at the national, provincial and district levels.

The team should be comprized of highly competent and experienced teachers and specialists from the Ministry of Education, the Universities and Teacher Education Colleges. The teams should be equipped with a variety of instructional materials, aids and equipment. The teams should prepare the training programmes according to the needs and requirements of an individual school or a group of schools in a locality.

There are advantages in using this model. The teachers are not removed from their places of work, and thus there is no additional expense in travelling. Moreover, there is no disruption of school work when the training is carried out in the evenings or on Saturdays. The discussion of the population issues and problems may be geared to the situation in the community, thus making it very relevant and real to the teachers.

Target group: Elementary and high school teachers who want to participate in teaching population education.

Goal: To provide on-the-spot in-service training to teachers in population education so that they can effectively teach population education.

Objectives: (See Model I, Phase III)

Duration: 5 to 7 week-ends or evening sessions.

4.4 Model IV - Correspondence Course Model

A large number of teachers working in rural areas do not have the opportunity to go back to college or attend in-service training which is conducted in the city. This group of teachers can be given training in population education through correspondence.

This model can be organized in the university or teacher education colleges. A group of faculty members should be identified and designated to carry out the task. In this model, the instructional materials need to be skilfully developed, reviewed and refined. The materials should be pre-tested and pilot studies should be conducted before the programme is extended.

The teachers are required to study and learn the content of the course according to the prescribed time schedule. Their answers to the questions in the correspondence lessons will be reviewed by the trainers and the comments communicated to the trainees for follow-up activities.

There are advantages in using this model. A large number of teachers can be reached, particularly teachers from remote areas. The training can take place without removing them from the place of their work.

Target group:

1. Elementary and high school teachers who are in rural areas or in remote places which are far from a college or regular training centre.
2. Teachers who cannot afford to attend a full-time face-to-face training programme.

Goal: To provide in-service training in population education for teachers in rural or remote areas, and for those who cannot afford to join a regular training course in order to prepare them to assist in the implementation of the national programmes.

Objectives: (See Model I, Phase III)

Duration: 3-4 months

Content: (See Model I, Phase III)

4.5 Model V - Mass media and self-learning model

Because of the time and expense involved in training large groups of teachers in a face-to-face setting, the use of mass media such as the radio and television or the use of self-learning materials or modules is another model for in-service training.

The materials developed for use should be tried out and revised before they are used on a wide scale.

4.6 Model VI - Informal training model

Under normal procedures of training, it would take more than a decade to train all the teachers in population education. In order to take the idea of population education to every

teacher, a model of informal training at the institutional level should also be used in addition to other models. In this model the principals and subject co-ordinators in each school who have received training in population education are given responsibility for training teachers in their respective schools. The scope and nature of content as well as the duration and time schedule can be decided upon by each institution. If this model is used, it is necessary to provide each institution with necessary instructional materials and aids. A training manual or guide should be developed by each country/province for the use of principals and subject co-ordinators. Evaluation tools which are used in formal training can be used in this model, with necessary modifications. Each institution should be required to send a report of its training programme to the district education officer who would pass on the consolidated information to the Education Officer at the provincial/regional/national level.

5.0 Methodologies

In so far as instructional methodologies are concerned, many of those suggested in Chapter 4 Section 6.0 for pre-service training programmes are appropriate for in-service programmes as well. The use of programmed materials, self-instructional packages and modules is also suggested in the case of models which envisage distance learning.

6.0 Follow-up activities, evaluation and feedback

Reference is requested to Chapter 6.

Chapter 6

EVALUATION AND FOLLOW-UP ACTIVITIES IN TRAINING

The evaluation of training is basically conducted to bring about a change in planning, implementing and improving a training programme. It is also used to determine the extent of success or failure of the objectives set for the programme, particularly the effectiveness of the teachers. In other words, evaluation in training is the process of: 1. assessing the objectives of the programme; 2. systematically collecting and analyzing data related to the objectives and 3. summarizing the data useful to decision makers for making changes in the programme or certifying that the programme is meeting the objectives.

Evaluation of training actually starts before the training programme, continues during the training and after the training including the follow-up Evaluation may take several forms:

1. Pre-training evaluation or context evaluation;
2. Process, in-course or formative evaluation;
3. Post-training evaluation, product or summative evaluation.

Pre-training evaluation

There are basic questions which should be considered in planning the training programme:

1. What are the needs of the trainees?
2. What programme objectives should be postulated to meet these needs?
3. What programme design or course is best suited to attain the objectives?
4. What human and material resources are to be utilized?
5. What are the planning strategies?

Baseline data on knowledge, attitudes and skills may be used to design the training programme and evaluate it.

The objectives which are defined will provide the framework of the programme. They will also provide a basis for evaluation activities.

In planning the training programme the following should be considered: procedures, materials, facilities, schedule, staff requirements, budget, etc. The planning can be done by committee deliberations, consulting specialists in the various disciplines, and review of existing reports and other literature on the subject.

The importance of the pre-training evaluation cannot be over-emphasized, considering that it provides the take-off for the training programme.

Process evaluation

This is the process of assessing the training programme itself as it progresses. Some basic questions which should be answered are:

1. Is the programme being implemented as planned?
2. What in-course improvements should be made to attain the objectives?

The purpose of collecting and analyzing data at this point of the training programme is to decide what changes in the programme are necessary. These changes may take the form of additional learning activities, practice sessions, remedial activities or tutoring.

There are 3 basic dimensions in relation to which the effectiveness of the training may be assessed:

1. The knowledge and understanding that the trainees acquire.
2. The attitudes, opinions and reactions they show.
3. The skills they acquire during the training.

Data can be obtained by feedback, informal talks with the trainees to get their opinions, observations of trainees, use of devices such as observation scales, opinion questionnaires, etc. These procedures will provide information regarding the activities and processes leading to the achievement of the objectives and be suggestive both for improving the programme under way, and organizing subsequent training programmes.

A specific example that may be mentioned is the use of short tests during the training session. The purpose is to enable the trainer to determine from time to time how well the trainees are meeting the training expectations. They are also a means of identifying the problems of the trainees in terms of learning the content, changing or reinforcing attitudes and demonstrating expected behaviour. Such tests are not intended to be used for grading. Their purpose is to provide feedback on the instructional procedures and to indicate possible improvements.

Post-training or product evaluation

At the end of the training programme, there is a need to determine whether the objectives have been achieved, and whether the trainees show some measurable gains in knowledge, attitudes and skills.

Some basic questions which should be answered are:

1. Have the training objectives been achieved?
2. Has the original training scheme been implemented?
3. Do the trainees show measurable gains in knowledge and understanding, attitudes and skills?
4. Should the training programme or any parts of the programme be revised, continued or terminated?

The data to be used for answering the questions above may be obtained by the use of comprehensive tests, demonstration lessons, comments of observers and specialists, impressions of the trainers and trainees.

An important point to remember in gathering data for evaluation purposes at all stages is timing. It should be well timed so that the data will be valid and reliable. Tests should not be given when trainees are tired and all set to go home or to do some exciting activities such as before or after a field trip. The trainees should have a clear understanding of the programme of the evaluation.

Follow-up activities

After the training programme, evaluation should continue by means of follow-up activities. The follow-up activities will be more meaningful and interesting if the trainees and trainers plan and work them out before the training programme is over. The trainee has the knowledge of his role before and after the training, while the trainers have the experience and expertise needed in follow-up strategies and know the problems encountered by the trainees in the past.

Some examples of follow-up activities are:

1. keeping a two-way communication open;
2. investigating the trainee's performance on-the-job or teaching effectiveness;
3. visiting the trainees in their schools;
4. using refined instruments to measure the on-the-job performance of the trainees;
5. inviting the trainees to the training centre to give first hand information on their experiences;
6. conducting refresher courses.

1. Using two-way communication system

A regular two-way communication by newsletters, reports, seminars, workshop, etc. should be maintained to remind the trainees that they are part of a network and that there are others who are doing the same kind of work. They may have similar problems and may learn from the others especially how they deal with their problems.

The trainees will need expert advice from time to time. Therefore, the trainers should be there to assist them.

2. Investigating the trainees on-the-job performance

The goal of the training programme is to develop a desirable set of student behaviours which will be taught by the teacher trainees when they go back. Problems of assessment arise in this connection. For example, how does one assess the effectiveness of the trainees in using the inquiry approach or valuing process? This is a real problem to all educators, not only to population educators. The problem is compounded if the evaluation is more on the non-verbal behaviour. There are attempts, though, to determine teaching effectiveness by defining objectives clearly and specifically. The expectations of the trainers will have to vary from place to place and the type of level of training programme conducted.

Another approach is to ask the students to rate the teachers' competence. This can be done by the use of refind measuring instruments or the use of micro-teaching techniques.

The rating of the students plus the rating of the supervisors during their visits and observation may also be used.

These types of follow-up activities can provide linkages with the training activities which may be improved or revised on the basis of the findings. In other words, the supervision of the trainees on the job is actually a part of the training evaluation and basic follow-up activity.

3. Visiting the trainees in their schools

The visits of the trainers should be planned ahead. Some of the visits should not be known to the former trainees. In these visits, the trainees may have a chance to talk freely about their experiences which they may not include in their written reports. In the process of conversation, information which cannot be gathered through the use of questionnaires may also come out. Some answers to questions not considered in the training programme may be discussed.

They will also feel important if they are visited, especially when persons from other agencies or other countries are brought along.

The visits can also help the trainees to adjust to their jobs again and some of the training evaluation results can be verified. And, of course, the trainees can be provided the technical assistance they need on the spot.

4. Using refined instruments to measure the on-the-job performance of the trainees

Criterion questions may be developed, pilot tested and refined for use here. The answer to them will help measure the achievement of on-the-job training objectives.

The results may also be used to improve the training programme.

5. Inviting the trainees to the training centre

Some former trainees may be invited to the training centre to give first-hand information regarding their experiences on-the-job to the trainers as well as to the teachers in training.

6. Conducting refresher courses

Refresher courses for the trainees may cover such areas as emerging trends in population education, on-the-job problems and needs and other experiences from which they can profit.

The results of all follow-up activities should reach the decision-makers in time for use by them. They should be embodied in short but comprehensive reports, that emphasize essentials, and they should not be very voluminous. It should be recognized however, that some reports will have to be in detail if concrete experiences are included.

Evaluation schedule for training

/This schedule is suggestive and necessary modifications should be made by the organizers according to the nature and scope of the training programme. For short-term orientation programmes, a different kind of schedule should be prepared/

1.0 Objectives

1.1 To provide for trainee participation in evaluating programme.

1.2 To utilize the experience gained from this programme to improve training programmes.

1.3 To facilitate follow-up activities.

1.4 To assess the impact of training on the achievement of trainees.

2.0 Scope

The schedule provides for:

2.1 Process evaluation.

2.2 Product evaluation.

3.0 The schedule

Instructions: We would like to have your views on the training programme and on your participation to help us to improve the programme. Please fill this form according to the instructions given at the beginning of each section.

3.1 Information relating to trainees' background

Please answer these questions

1. Name .....
2. Sex M ..... F .....
3. Age .....
4. Nationality .....
5. Civil status: Married ..... Single .....
   Widow/Widower.....
6. Religion .....
7. Number of children: Sons .....Daughters.....
8. Residence during the last five years:
   1. .....
   2. .....
   3. .....
9. Residence during the last five years:
   1. .....
   2. .....
   3. .....

Rural ..... Urban ..... Both .....

10. Position/Occupation .....
11. Institution .....
12. Academic and professional qualifications .....
13. Professional service .....
14. Experience in teaching population education/ preparing materials in this field/organizing programmes .....
15. Previous training - Pre-service .....
16. Previous training - In-service .....

.....

3.2 Objectives: Please place mark under the column which describe the extent to which you think each objective of the training programme has been achieved.

Objectives	Completely achieved	Achieved to a large extent	Moderately achieved	Only partly achieved	Not achieved
1. to develop understanding of population concepts					
2. to analyze a) the role of population in development					
b) population issues in your country and in the world					
3. to develop awareness of a) ethical issues in population education					
b) the importance of programme development for population education in out-of-school sector					
4. to obtain insights about a) the organization of population education programmes in the region					
b) methods of teaching, such as values clarification and discovery-oriented approaches					
c) population related decision-making					

Objectives	Completely achieved	Achieved to a large extent	Moderately achieved	Only partly achieved	Not achieved
d) curriculum development in population education					
e) instructional materials development for out-of-school population education					
f) performance evaluation					
g) research utilization strategies					
h) the linkages of formal and non-formal education					

3.3 Organization: Please check each item in the appropriate column according to how you rate these features of the training programme.

	Very good	Good	Satis-facto-ry	Poor	Very poor
1. Planning and preparation of the training course					
2. Provision for self-study					
3. Duration of programme					
4. Arrangement of time schedule					
5. Usefullness of assignments					
6. Amount of practical activities					
7. Effectiveness of instructional materials and activities					
8. Presentation of lectures/talks					
9. Presentation of country experiences					
10. Quality of resource persons					
11. Extent of friendly atmosphere					
12. Adequacy of resource materials and library facilities					
13. Overall rating of programme					
14. Other arrangements, i.e. hotel travel					

3.4 General Observation

1. What aspects of the programme did you find -

   a. most useful?

   b. least useful?

2. Suggest topics that you feel should have been included in the programme.

3. Which topic, in your opinion, was not sufficiently covered?

4. Which, if any, topic should not have been included?

5. Which method of presentation did you prefer?

6. What changes/modifications would you suggest in the organization of the programme?

7. What kind of follow-up activities do you propose to undertake after the programme?

8. What kind of follow-up activities do you expect from us?

9. Do you consider the training programme to be:

	Very important	Important	Less important	Not important
a. In general	_____	_____	_____	_____
	_____	_____	_____	_____
b. For your country	_____	_____	_____	_____
	_____	_____	_____	_____
c. For your own work	_____	_____	_____	_____
	_____	_____	_____	_____

Additional comments (if any). . . . . .

. . . . . .

. . . . . .

10. Overall, were your expectations of the course fulfilled?
Yes/No. If no, why?

11. Further comments/suggestions.

APPENDIX

Select Reading List

A. On the pedagogical aspects of population education

Two publications which deal with several of the pedagogical aspects are:

Unesco: Regional Workshop on Population and Family Education, 1970. Final Report. Bangkok, 1971.

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Elgin, Duane et.al. City size and the quality of life. Washington, D.C., 1974.

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Note: Reference should be made to the materials put out by the population education projects in the various countries in order to see in a concrete way the manner in which the pedadogical aspects and the substantive content have been incorporated in the particular setting of each country.

C. Unesco Publications

Population education in Asia: a source book. 1975. 5 volumes. 337 p.

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Teacher's study guide on the biology of human populations: Asia. 1975. 438 p.

Home economics education and population education: a survey study in selected Asian countries, by Manee Kuanpoonpol. 1976. 163 p. This study reviews home economics education in nine countries: India, Indonesia, Iran, the Republic of Korea, Malaysia, Philippines, Singapore, Sri Lanka and Thailand.

Education and the urban migrant. 1977. 112 p. This study analyzes the socio-economic and educational status of migrants to Bangkok, Jakarta and Manila.

Bibliographies on population education, No. 1, 1977. 218 p. Population education materials from six countries are described: India, the Republic of Korea, Malaysia, Philippines, Sri Lanka and Thailand. These annotated bibliographies are available for individual countries or as a complete set.

Bibliographies on population education, No. 2: Population education and socio-economic development. 1977. 119 p. The first part of this bibliography describe population education materials appearing in journals, newsletters and periodical publications. The second part reviews useful articles and studies about socio-economic development, agriculture, health and other topics that relate to population education. The accent is on the Asian region.

Information in support of population activities. Paris, Unesco, 1974. 78 p. (Available also in French).

Staff papers

De la Cruz, Leonardo. Ethical issues in population education: topics for value clarification. 1977. 10 p.

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Group Training Course in Population Education, Bangkok, 26 September-14 October 1977. Report.

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Documentation information

A documentation kit for population education. 1977. In 16 parts, this kit describes how population education materials can be acquired, classified and distributed. Meant for librarians and those involved in distributing materials, this kit can be used to develop population education information and documentation services.

Population education accessions list.
Bi-annual.
January-June 1977 40 p.
July-December 1977.

Audio-visual kit on "An Introduction to Demography in Population Education

This six-unit presentation introduces teachers to population and to basic concepts of demography that are used in population education. Prepared and distributed by the Unesco Regional Office for Education in Asia (Bangkok), it is meant for use by upper primary and secondary school teachers who are receiving training in population education. It can also be of use to principals, supervisors and others whose activities relate to population education within the school setting.

Each of the six units is composed of a cassette tape, a set of slides (about 200 slides in all) and some workbook exercises. Any standard cassette tape recorder and carousel slide projector may be used with the tapes and the slides. The total programme requires a minimum of three hours. The content of each unit is based on the Asian region -- its processes of development, its population phenomena and population education programmes.

The six units of An introduction to demography in population education are:

Unit I - Planning for the future

Unit II - Population and population growth

Unit III - Measuring population growth

Unit IV - Composition, structure of population and demographic transition

Unit V - Our future is in our hands

Unit VI - Population education

Note: Enquiries about Unesco publications should be addressed to:

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